

UNITED STATES DISTRICT COURT  
FOR THE CENTRAL DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA, )  
Plaintiff, )  
)  
and the STATES OF ARKANSAS; )  
INDIANA; ILLINOIS; IOWA; )  
KANSAS; MINNESOTA; MISSOURI; )  
NEBRASKA; NORTH DAKOTA; )  
SOUTH CAROLINA; )  
TEXAS; and the IOWA COUNTIES )  
of LINN AND POLK; )  
and the NEBRASKA COUNTY OF )  
LANCASTER, )  
)  
Plaintiff-Interveners, )  
)  
v. )  
)  
ARCHER DANIELS MIDLAND COMPANY, ) CIVIL ACTION NO.  
)  
)  
Defendant. )  
)

CONSENT DECREE

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Attachments 1 through 13

WHEREAS, Plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency (herein, "EPA"), has, simultaneously with the lodging of this Consent Decree, filed a Complaint alleging that Defendant, Archer Daniels Midland Company ("ADM"), is and has been in violation of the following statutory and regulatory requirements of the Clean Air Act (the "Act") at its fifty-two (52) processing plants at forty-three (43) facilities nationwide: Part C of Title I of the Act, 42 U.S.C. § 7470-7492, Prevention of Significant Deterioration ("PSD"); certain New Source Performance Standards ("NSPS"), 40 C.F.R. Part 60; the state or federal implementation plans ("SIPs" or "FIPs") which incorporate and/or implement the above-listed federal requirements; and SIP permitting programs for construction and operation of new and modified stationary sources;

WHEREAS, the States of Arkansas, Indiana, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Carolina, Texas, and the Iowa Counties of Linn and Polk, and the Nebraska County of Lancaster, have filed Complaints in Intervention, joining in the claims alleged by the United States;

WHEREAS, the Complaints filed by the federal and state Plaintiffs (herein "Plaintiffs") further allege that ADM commenced construction of major emitting facilities and major modifications of major emitting facilities without first

obtaining the appropriate preconstruction permits and installing the appropriate air pollution control equipment required by 40 C.F.R. § 52.21 and the SIPs applicable to each of ADM's 43 facilities;

WHEREAS, ADM does not admit the violations alleged in the Complaints;

WHEREAS, in March 2001, ADM voluntarily approached EPA to open negotiations with EPA and all concerned states toward a comprehensive resolution of compliance concerns under federal and state air quality programs, including alleged violations that were the subject of pending litigation previously initiated by the State of Illinois;

WHEREAS, on March 21, 2001, ADM executed a letter of commitment to negotiate with Plaintiffs for emission reductions at its facilities, as the basis for a comprehensive resolution of federal and state concerns;

WHEREAS, ADM has worked cooperatively with Plaintiffs to structure a comprehensive program that will result in reduction of approximately 63,000 tons of air pollution annually from ADM facilities in sixteen states;

WHEREAS, installations of air pollution control equipment undertaken pursuant to this Consent Decree are intended to abate or control atmospheric pollution or contamination by removing, reducing, or preventing the emission of pollutants, and as such,

may be environmentally beneficial projects that may be considered to be pollution control projects by the appropriate permitting authorities;

WHEREAS, ADM is implementing and enhancing an extensive corporate-wide environmental management program and has an active auditing program, both of which are designed to prevent future violations of environmental laws. ADM has provided Plaintiffs with a description of these programs;

WHEREAS, Plaintiffs and ADM have agreed that settlement of this action is in the public interest, will result in air quality improvements in the areas where these facilities are located, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, Plaintiffs and ADM consent to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, and without any admission of the violations alleged in the Complaints, it is hereby ORDERED AND DECREED as follows:

#### **I. JURISDICTION AND VENUE**

1. The Complaints state a claim upon which relief can be granted against ADM under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court has jurisdiction of the subject matter herein and over the parties

consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Section 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c) because ADM owns and operates facilities in this District.

## **II. APPLICABILITY**

2. The provisions of this Consent Decree shall apply to and be binding upon the Plaintiffs, and upon ADM as well as ADM's officers, employees, agents, successors and assigns, and shall apply to each of ADM's facilities listed herein for the life of the Consent Decree.

(a). In the event ADM proposes to sell or transfer all or part of any of its facilities subject to this Consent Decree, it shall advise such proposed purchaser or successor-in-interest in writing of the existence of this Consent Decree and provide them with a copy of the Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA and the air pollution control authority where the facility is located at least 30 days prior to such sale or transfer. This provision does not relieve ADM from having to comply with any applicable state or local regulatory requirement regarding notice and transfer of facility permits.

(b). ADM may comply with any emission reduction requirement of this Consent Decree by permanently shutting down the emission

unit to which the requirement applies. ADM shall provide written notice of the shut down to the appropriate Plaintiffs and permitting authorities prior to the planned shut down as required in the applicable Control Technology Plan. For purposes of this Consent Decree, the term "appropriate Plaintiff" shall mean the United States and the Plaintiff-Intervener where the particular plant is located.

### **III. FACTUAL BACKGROUND AND DEFINITIONS**

3. ADM, a Delaware corporation, is a multi-national agribusiness that owns and operates 43 facilities in 16 states which process corn, wheat, soybeans, and other oilseeds into value-added products used in the food, feed, ethanol and other industries.

4. ADM's corporate headquarters is located in Decatur, Illinois. ADM is a "person" as defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e), and an "operator" as defined in Section 113(h) of the Act, 42 U.S.C. § 7413(h), and the federal and state regulations promulgated pursuant to the Act.

5. (a). Plaintiffs allege that certain of ADM's facilities are "major emitting facilities," as defined by Section 169(1) of the Act, 42 U.S.C. § 7479(1), and the federal and state regulations promulgated pursuant to the Act.

(b). The requirements of the Control Technology Plans ("CTPs") which are Attachments 2 through 11 to this Consent



Decree, are incorporated herein by reference and made a directly enforceable part of this Consent Decree. Non-material modifications to the CTPs may be made by written approval of the appropriate Plaintiffs. Such approval shall not be withheld if the modification meets the emission reduction requirements and schedules set forth in this Consent Decree.

6. Unless otherwise defined herein, terms used in this Consent Decree shall have the meaning given to those terms in the Act, and the federal and state regulations promulgated pursuant to the Act. For purposes of this Consent Decree, the term "plant" refers to any ADM processing plant that is listed in this Decree at Paragraphs 7 through 14. Certain of ADM's 43 facilities include more than one plant.

7. ADM owns and operates the following twenty-two (22) plants for processing soybeans:

- (a). Champaign, Illinois (now closed and sold)
- (b). Clarksdale, Mississippi (now closed)
- (c). Decatur West, Illinois
- (d). Decatur East, Illinois
- (e). Des Moines, Iowa
- (f). Fostoria, Ohio
- (g). Frankfort, Indiana
- (h). Fredonia, Kansas (now closed)
- (i). Fremont, Nebraska

- (j). Galesburg, Illinois
- (k). Granite City, Illinois (now closed)
- (l). Helena, Arkansas (now closed)
- (m). Kershaw, South Carolina
- (n). Lincoln, Nebraska
- (o). Little Rock, Arkansas
- (p). Mankato, Minnesota
- (q). Mexico, Missouri
- (r). North Kansas City, Missouri
- (s). Quincy East, Illinois
- (t). Quincy West, Illinois
- (u). Taylorville, Illinois (now closed)
- (v). Valdosta, Georgia

8. ADM owns and operates the following twelve (12) plants for processing corn germ, cottonseed, canola and sunflower seed:

- (a). Clinton, Iowa (corn germ)
- (b). Decatur, Illinois (corn germ)
- (c). Goodland, Kansas (sunflower seed)
- (d). Levelland, Texas (cottonseed) (now closed)
- (e). Memphis, Tennessee (cottonseed)
- (f). North Little Rock, Arkansas (cottonseed) (now closed)
- (g). Port Gibson, Mississippi (cottonseed) (now closed)
- (h). Quanah, Texas (cottonseed) (now closed)

- (i). Richmond, Texas (cottonseed)
- (j). Sweetwater, Texas (cottonseed) (now closed)
- (k). Velva, North Dakota (canola)
- (l). Valdosta, Georgia (cottonseed)

9. ADM owns and operates the following five (5) plants for multi-seed processing:

- (a). Augusta, Georgia (peanut, corn germ, canola, soybean)  
(now closed)
- (b). Enderlin, North Dakota (canola, soybean, and sunflower seed)
- (c). Lubbock, Texas (corn germ, cottonseed, and peanuts)
- (d). Lubbock North, Texas (corn germ, cottonseed, and peanuts) (now closed)
- (e). Red Wing, Minnesota (canola, flax, and sunflower seed)

10. ADM produces crude vegetable oil and meal products by removing oil from the oilseeds identified in Paragraphs 7-9 above. Some oil extraction is accomplished through direct contact with an organic solvent. ADM's plants which use solvent extraction for vegetable oil production are major sources of n-hexane, a hazardous air pollutant ("HAP"), and may be major sources of volatile organic compounds ("VOCs"). Sources of VOC and HAP emissions include the solvent recovery system, meal

dryers, coolers, residual solvent in meal and oil products, leaking equipment components, storage tanks, and wastewater. These plants are subject to the requirements of 40 C.F.R. Part 63, Subpart GGGG (vegetable oil production NESHAP), applicable SIP requirements, and in some instances are subject to the PSD requirements of 40 C.F.R. Part 52.

11. ADM owns and operates the following five (5) wet corn mill plants for the production of corn products, including ethanol:

- (a). Cedar Rapids, Iowa
- (b). Clinton, Iowa
- (c). Columbus, Nebraska (formerly Minnesota Corn Processors)
- (d). Decatur, Illinois
- (e). Marshall, Minnesota (formerly Minnesota Corn Processors)

12. ADM owns and operates two dry corn mill plants for the production of corn products, including ethanol:

- (a). Peoria, Illinois
- (b). Walhalla, North Dakota

13. ADM's corn processing plants produce a number of products from corn, including starch, sweeteners, germ, ethanol, and animal feed. The manufacturing process at ADM's corn processing plants results in emissions of significant quantities

of regulated air pollutants, including nitrogen oxides ("NO<sub>x</sub>"), carbon monoxide ("CO"), particulate matter ("PM"), sulfur dioxide ("SO<sub>2</sub>"), VOCs and HAPs. The primary sources of these emissions are the dryers, carbon furnaces, fermentation units, boilers, and ethanol load-out systems. These plants are subject to the PSD requirements of 40 C.F.R. Part 52 and applicable SIP requirements.

14. ADM owns and operates the following six (6) additional plants:

- (a). Southport, North Carolina (citric acid)
- (b). Decatur, Illinois (BioProducts)
- (c). Keokuk, Iowa (wheat gluten)
- (d). Decatur, Illinois (vitamin E)
- (e). Decatur, Illinois (vitamin C)
- (f). Decatur, Illinois (De-oiled lecithin)

15. ADM operates combustion sources at all 43 facilities, such as industrial boilers, process heaters, and burners for dryers and other process units, which are sources of NO<sub>x</sub>, PM and PM<sub>10</sub>, CO and SO<sub>2</sub> emissions.

#### **IV. COMPLIANCE PROGRAM FOR CORN PROCESSING PLANTS**

**PROGRAM SUMMARY:** As set forth in this Part, ADM shall implement a program to reduce the emissions of VOCs, CO, PM, NO<sub>x</sub>, and SO<sub>2</sub> from its corn processing plants nationwide by approximately 59,000 tons per year. ADM shall accomplish the emission reductions through the installation of pollution control technologies and implementation of emission reduction projects in accordance with the compliance schedules set forth in this Consent Decree and in the facility-specific Control Technology Plans ("CTPs"). Where required, ADM shall propose new emission limits as a result of these projects and shall demonstrate compliance with applicable limits at individual units through performance tests, continuous emission or operating parameter monitoring, and recordkeeping. ADM shall submit permit applications to incorporate the new limits into federally-enforceable and all state-required permits for each facility.

##### **A. FACILITY-SPECIFIC REQUIREMENTS**

16. The specific requirements applicable to ADM's corn processing plants are contained in the attached CTPs numbers 2 through 8, and Attachment 12. The CTPs include the following:

- (a) Identification of all units to be controlled;
- (b) Engineering design criteria for the proposed controls;
- (c) Applicable emission limits, as specified in this Section IV;
- (d) Required procedures for the proposal and setting of new emission limits;
- (e) A schedule for installation;
- (f) Identification of monitoring parameters and parameter limits;

(g) Identification of all units for which ADM must perform emissions testing along with the schedule for those tests and the applicable test methods; and

(h) Identification of emission units that will have Continuous Emission Monitoring Systems ("CEMS"), and a description of how ADM will monitor compliance using the CEMS.

17. ADM shall meet the unit emission limits or percentage reductions (collectively referred to herein as "emission reduction projects") set forth below in accordance with the attached CTPs. Where the Consent Decree requires "percent reductions," these reductions shall be demonstrated by calculating the difference between the mass of pollutants measured at the control device inlet and outlet unless otherwise specified in a CTP or Attachment 12. Where part per million ("ppm") limits are referenced in this Consent Decree or the CTPs, compliance will be determined using ppm by volume on a dry basis. Where optimization of existing equipment is required under this Consent Decree, initial startup will be defined as completion of the optimization study, for purposes of Paragraph 34 and the applicable CTP.

18. CEDAR RAPIDS, IOWA (CTP at Attachment 2)

(a). VOC/CO/PM Emission Reduction Projects

Gluten Feed Dryers 1-5:

VOC: 95% control or 10 parts per million  
("ppm")  
CO: 90% control or 100 ppm  
PM: Emission limit to be set as described in  
the CTP

Gluten Meal Dryers 1-2:

VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limit to be set as described in  
the CTP

Carbon Furnaces 1-3:

VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limit to be set as described in  
the CTP

(b). VOC Emission Reduction Projects

Ethanol Fermenters:  
95% control or 20 ppm  
Non-dedicated Ethanol Loadout:  
95% control

(c). SO<sub>2</sub> Emission Reduction Projects

Fluid Bed Germ Dryer 1:  
90% control or 20 ppm

(d). NO<sub>x</sub> Projects

Cogen Boilers 1-3:  
Installation of selective non-catalytic  
reduction ("SNCR") and establishment of  
emission limit  
Cogen Boiler 5:  
Optimization of SNCR as specified in  
Iowa Permit #98-A-507P  
Package Boilers:  
Shutdown to achieve a reduction of 55  
tons from the package boiler baseline  
as specified in Attachment 12

19. CLINTON, IOWA (CTP at Attachment 3)



(a). VOC/CO/PM Emission Reduction Projects

Stearns Dryers 1-3:

VOC: 95% control or 10 ppm

CO: 90% control or 100 ppm

PM: Emission limit to be set as described in the CTP

Gluten Intensa Dryers 1, 5 and 6:

VOC: 95% control or 10 ppm

CO: 90% control or 100 ppm

PM: Emission limit to be set as described in the CTP

Carbon Furnaces 1-2:

VOC: 95% control or 10 ppm

CO: 90% control or 100 ppm

PM: Emission limit to be set as described in the CTP

(b). VOC Emission Reduction Projects

Yeast Propagators:

95% control or 20 ppm

Ethanol Fermenters:

95% control or 20 ppm

Non-dedicated Ethanol Loadout:

95% control

Stillage MR Vents:

Installation of control equipment designed to achieve 95% control, with emission limits to be set as described in the CTP

Millhouse Vent:

95% control or 20 ppm

(c). SO<sub>2</sub> Emission Reduction Projects

Stearns Dryers 1-3:

90% control or 20 ppm

Vetter Dryers 1-5:

90% control or 20 ppm

Gluten Intensa Dryers 1, 5 and 6:

90% control or 20 ppm

Leader Dryers 1-4:

90% control or 20 ppm

Carbon Furnaces 1-3:

90% control or 20 ppm  
Stoker boilers nos. 3-5:  
1.2 lbs SO<sub>2</sub>/MMBtu on a 30-day rolling  
average  
Cyclone boilers nos. 6-7:  
Meet the SO<sub>2</sub> emission limits specified  
in Paragraph 26

(d). NO<sub>x</sub> Emission Reduction Projects

Cyclone Boilers 6-7:  
Emissions reductions projects and  
establishment of emission limits, as  
required in the CTP

Boilers 1-2:  
Installation of low-NO<sub>x</sub> burners and  
establishment of emission limits

20. DECATUR, ILLINOIS (CTP at Attachment 4)

(a). VOC/CO/PM Emission Reduction Projects

Gluten Feed/Fiber Dryers 1-7:  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limits to be set as described  
in the CTP

Gluten Meal Dryers 1-2:  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limits to be set as described  
in the CTP

Carbon Furnaces 1-3:  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limits to be set as described  
in the CTP

(b). VOC Emission Reduction Projects

Germ Dryers (Fluid Bed 1 & RST 1B; FB2 and RST 1A,  
1C and 2) and Millhouse Vent:

95% control or 20 ppm

Yeast Propagators:

95% control or 20 ppm

Ethanol Fermenters:

95% control or 20 ppm  
Non-dedicated Ethanol Loadout:  
95% control  
Stillage MR vents:  
Installation of control equipment  
designed to achieve 95% control, with  
emission limits to be set as described  
in the CTP

(c). SO<sub>2</sub> Emission Reduction Projects

Gluten Feed/Fiber Dryers 1-7:  
90% control or 20 ppm  
Gluten Meal Dryers 1-2:  
90% control or 20 ppm  
Germ Dryers (Fluid Bed 1 & RST 1B; FB2 and RST  
1A,1C and 2) and Millhouse Vent:  
90% control or 20 ppm  
Carbon Furnaces 1-3:  
90% control or 20 ppm

(d). NO<sub>x</sub> Emission Reduction Projects

Cogen Boilers 1-6:  
Installation of SNCR and establishment  
of emission limits  
Cogen Boiler 9:  
Optimization of SNCR and establishment  
of emission limit, as specified in  
Illinois permit # 97050097  
Feedhouse Boilers 5, 6, 9 and 10:  
Permanent shutdown

21. MARSHALL, MINNESOTA (CTP at Attachment 5)

(a). VOC/CO/PM Emission Reduction Projects

Gluten Flash Dryer:  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
  
Carbon Furnace 1:  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limits to be set as described  
in the CTP

(b). VOC Emission Reduction Projects

Feedhouse and MR Vent:  
95% control or 20 ppm  
Millhouse Vent:  
95% control or 20 ppm  
Ethanol Fermenters:  
95% control or 20 ppm  
Non-dedicated Ethanol Loadout:  
95% control

(c). SO<sub>2</sub> Projects

Coal Boilers 1-2:  
Emission limit of 1.2 lb/MMBtu

(d). NO<sub>x</sub> Projects

Coal Boilers 1-2: Emission limits to be set as  
described in the CTP

22. COLUMBUS, NEBRASKA (CTP at Attachment 6)

(a). PM Emission Reduction Projects

Starch Dryer #1:  
Emission limits to be set as described  
in the CTP

Silt Emissions from Roads:  
Submission of permit application  
addressing control of road silt

(b). VOC Emission Reduction Projects

Germ Dryers 1-3:  
95% control or 20 ppm  
Millhouse Vent:  
95% control or 20 ppm  
Stillage MR Vent:  
Installation of control equipment  
designed to achieve 95%, with emission  
limits to be set as described in the CTP  
VB (Distillation) Scrubber Vent:  
95% control or 20 ppm  
Ethanol Fermenters:  
95% control or 20 ppm

Non-dedicated Ethanol Loadout:  
95% control

(c). NO<sub>x</sub> Emission Reduction Projects

Boiler #1:  
Emission limit of 0.06 lb/MMBtu

(d). ADM shall submit a PSD permit application for the Columbus facility and correct such increment and NAAQS non-compliance as might be indicated in the process, as specified in more detail in the CTP. Such corrections as indicated in the resulting PSD permit may require additional emissions reductions beyond those presently stated in this Consent Decree and CTP. Such additional emission reductions shall be considered an obligation of and enforceable under the Decree. No further reductions shall be imposed for purposes of meeting best available control technology ("BACT") standards beyond those required under the Consent Decree.

23. PEORIA, ILLINOIS (CTP at Attachment 7)

(a). VOC/CO/PM Emission Reduction Projects

Direct-Fired Feed Dryers (RTO bypass stream):  
VOC: 95% control or 10 ppm  
CO: 90% control or 100 ppm  
PM: Emission limits to be set as described  
in the CTP

(b). VOC Emission Reduction Projects

Yeast Propagators:  
95% control or 20 ppm  
Ethanol Fermenters:  
95% control or 20 ppm  
Non-dedicated Ethanol Loadout:  
95% control

(c). SO<sub>2</sub> Emission Reduction Projects

Coal boiler nos. 1-3:  
Meet the SO<sub>2</sub> emission limits specified  
in Paragraph 25

24. WALHALLA, NORTH DAKOTA (CTP at Attachment 8)

(a). VOC/CO/PM Emission Reduction Projects

DDGS dryer:

VOC: 95% control or 10 ppm

CO: 90% control or 100 ppm

PM: Emission limit to be set as described in the CTP

(b). VOC Emission Reduction Projects

Yeast Propagator:

95% control or 20 ppm

Ethanol Fermenters:

95% control or 20 ppm

Non-dedicated Ethanol Loadout:

Operational limit of less than 15% by volume non-dedicated truck loadouts per calendar year as specified in the CTP

(c). NO<sub>x</sub> Emission Reduction Projects

DDGS dryer:

Installation of a low-NO<sub>x</sub> burner and establishment of emission limits

25. SO<sub>2</sub> Emission Reduction Projects for Peoria boiler nos.

1-3: ADM shall reduce emissions of SO<sub>2</sub> from Peoria Coal Boilers 1, 2 and 3 in order to meet the following requirements:

(a). 12-month limit: ADM's combined SO<sub>2</sub> emissions from Peoria Coal Boilers 1, 2 and 3 shall not exceed 3,400 tons per rolling 12-month period.

(b). 30-day limit: ADM's combined SO<sub>2</sub> emissions from Peoria Coal Boilers 1, 2 and 3 shall not exceed 421 tons per rolling 30-day period.

26. SO<sub>2</sub> Emission Reduction Projects for Clinton Coal Boilers

6 and 7: ADM shall reduce emissions of SO<sub>2</sub> from Clinton Coal Boilers 6 and 7 in order to meet the following requirements:

- (a). 12-month limit: ADM's combined SO<sub>2</sub> emissions from Clinton Coal Boilers 6 and 7 shall not exceed 2,934 tons per rolling 12-month period.
- (b). 30-day limit: ADM's combined SO<sub>2</sub> emissions from these units shall not exceed 338 tons per rolling 30-day period.
- (c). ADM shall meet these limits through a combination of emission reduction projects as described in the CTP.

27. ADM's Cedar Rapids and Decatur Cogen Boilers shall comply with the SO<sub>2</sub> emission limits as set forth in the CTPs for these plants.

**B. IMPLEMENTATION SCHEDULE**

28. VOC Emission Reduction Schedule:

As provided in Paragraphs 16 through 24 above, ADM shall reduce VOC emissions from its corn plants located in Cedar Rapids and Clinton, Iowa, Decatur and Peoria, Illinois, Marshall, Minnesota, Columbus, Nebraska, and Walhalla, North Dakota. These emission reduction projects are estimated to result in VOC emission reductions of 16,800 tons per year (tpy). The schedule for implementing these emission reductions is as follows:

(a). ADM shall achieve a minimum of one-third (i.e., 5,600 tpy) of the estimated VOC emission reductions by December 31, 2005. ADM shall demonstrate compliance with this requirement in its July 30, 2006 semiannual report under this Decree.

(b). ADM shall achieve a minimum of three-fourths (i.e., 12,600 tpy) of the VOC emission reductions from these emissions units by December 31, 2007. ADM shall demonstrate compliance with this requirement in its July 30, 2008 semiannual report under this Decree.

(c). ADM shall achieve 100% of the VOC emission reductions from these emissions units by December 31, 2012. ADM shall demonstrate compliance with this requirement in its July 30, 2013 semi-annual report under this Decree.

(d). On or before December 31, 2007, ADM shall achieve a minimum of 60% of the total targeted VOC emission reductions in each state in which emissions reduction projects are planned. ADM shall demonstrate compliance with this requirement in its July 30, 2008 semiannual report under this Decree.

(e). ADM shall demonstrate compliance with the requirements of this Paragraph by demonstrating that, with respect to the applicable deadline, (1) it has installed and is operating VOC controls, and/or (2) it has met the applicable control requirements under this Decree through enhancement of existing processes and/or controls and/or through permanent shutdowns.



Baseline emissions, required control efficiencies and estimated emission reductions from each of the units covered by this Paragraph are defined in Attachment 12.

(f). If any of the projects fails to meet the control requirements of this Decree, compliance with this Paragraph (other than Subparagraph (c)) will be determined by multiplying the demonstrated control efficiency for each completed project by the baseline emissions rate in Attachment 12. If ADM fails to demonstrate compliance it shall be subject to stipulated penalties as of the installation deadline specified in Subparagraphs (a) through (d) above (e.g., December 31, 2005).

29. SO<sub>2</sub> Emission Reduction Schedule:

(a). For units at which ADM is required to implement emission reduction projects for both SO<sub>2</sub> and VOC, the deadline for implementation of the SO<sub>2</sub> emission reduction projects will be the same as the deadline for completion of the VOC project.

(b). ADM shall demonstrate compliance with the 30-day rolling emission limit for Peoria Coal Boilers 1, 2, and 3 as required in Paragraph 25, by March 31, 2007 and with the 12-month rolling emission limit by March 31, 2008.

(c). ADM shall demonstrate compliance with the 30-day rolling average emission limits for Clinton Stoker Boilers 3, 4, and 5, as required in Paragraph 19 by no later than May 31, 2003.

(d). ADM shall demonstrate compliance with the 30-day rolling emission limits for Clinton Cyclone Boilers 6 and 7 as required in Paragraph 26, by March 31, 2009 and with the 12-month rolling emission limit by March 31, 2010.

(e). ADM shall complete the remaining SO<sub>2</sub> emission reduction projects according to the schedule(s) in the CTP(s).

30. NOx Emission Reduction Schedule:

(a). By no later than March 31, 2010, ADM shall complete the required emission reduction projects as defined in the CTPs for Decatur and Cedar Rapids on enough of the following list of units such that the total maximum heat input capacity of the controlled units shall be at least 1750 MMBTU/hr. By no later than March 31, 2012, the remainder of the units listed below will be controlled.

Cedar Rapids Cogen Boiler 1	(552 MMBtu/hr)
Cedar Rapids Cogen Boiler 2	(552 MMBtu/hr)
Cedar Rapids Cogen Boiler 3	(552 MMBtu/hr)
Decatur Cogen Boiler 1	(492 MMBtu/hr)
Decatur Cogen Boiler 2	(492 MMBtu/hr)
Decatur Cogen Boiler 3	(492 MMBtu/hr)
Decatur Cogen Boiler 4	(492 MMBtu/hr)
Decatur Cogen Boiler 5	(492 MMBtu/hr)
Decatur Cogen Boiler 6	(700 MMBtu/hr)

(b). ADM shall complete the remaining NOx emission reduction projects according to the schedule(s) in the CTP(s).

### **C. DEMONSTRATION OF COMPLIANCE**

**PROGRAM SUMMARY**. Upon completion of each project required under this Section IV, ADM shall demonstrate compliance with the applicable emission limit and/or destruction efficiency through one or more of the following, as appropriate: source testing, continuous emission or parametric monitoring, recordkeeping and reporting, as set forth in the following Paragraphs 31-34 and the attached, facility-specific CTPs. Where ADM is required to use CEMS or parametric monitoring, such monitoring data shall be used for demonstration of compliance.

31. Equipment Operation During Shakedown Period. For each emission reduction project required under this Section IV, during the period between initial startup of the project until completion of the source testing required by Paragraph 34, ADM shall continuously operate all process and control equipment in a manner to minimize emissions to the greatest extent practicable.

32. Monitoring of Operating Parameters. Where monitoring of operating parameters is required, ADM shall begin to monitor the operating parameters as specified in the CTPs no later than 30 days following initial startup of the project.

33. CEMS Use and Certification. For each emission reduction project required under this Section IV for which a CEMS is mandated, ADM shall install the CEMS and begin to continuously monitor emissions no later than 60 days after initial startup of

the emission reduction equipment as specified in the CTP. By no later than 180 days after initial startup, ADM shall certify and calibrate, and thereafter continuously maintain and operate each CEMS as specified in the CTP.

34. Source Testing. By no later than 180 days after initial startup of each emission reduction project required under this Section IV, if continuous emissions monitoring is not performed on the unit, ADM shall conduct source testing to evaluate compliance with applicable requirements of this Consent Decree. ADM shall conduct source testing in accordance with this Paragraph and the CTPs. Testing for compliance or demonstration of emission limits shall be conducted in accordance with a protocol approved by the appropriate Plaintiffs. During the test, all units shall be operated at maximum representative operating conditions. During source testing, ADM shall monitor, at a minimum, the operating parameters specified by the facility-specific CTP.

**D. EMISSION LIMITS AND EMISSIONS REPORTING**

35. Demonstration Period and Optimization Studies. ADM's operation of low NOx burners for a period of 180 days shall constitute the "demonstration period" for this technology. The "optimization study" for each SNCR application is described in the applicable CTP.

36A. Initial Emissions Report. No later than 60 days after the completion of the source testing, demonstration period, or optimization study, whichever occurs later, ADM shall submit an Initial Emissions Report. This report shall include, where applicable, the source test report or a summary of emission monitoring data during the demonstration period or optimization study, ADM's proposed emission limit as required by the facility-specific CTP, and, where required under this Consent Decree or the facility-specific CTP, the operating parameter(s) ranges or limits that ADM proposes to monitor for compliance demonstration.

36B. Proposed and Final Emission Limits. The appropriate Plaintiffs shall set the final emission limit, and operating parameter ranges or limits, as appropriate, based on ADM's Initial Emissions Report under Paragraph 36A, process variability, a reasonable certainty of compliance and any other information pertinent to the specific emission unit. ADM shall comply with the proposed emission limit immediately following submission of the Initial Report and shall comply with the Final Limit no later than 60 days following ADM's receipt of notice from the Plaintiffs regarding the final emission limit.

**E. PERMITS**

37. Construction Permits. ADM shall seek to obtain all required permits, including any SIP pre-construction permits as may be required by the affected permitting authority, for the

construction of pollution control devices and any other equipment required under this Consent Decree or required to meet the emission reduction requirements specified in this Consent Decree.

38. Unit Operating Permits. ADM shall apply, consistent with applicable regulations, for modification of its federally-enforceable operating permit(s) to incorporate, as appropriate, the emission limits, operational requirements, and the monitoring and recordkeeping requirements set forth in or developed pursuant to this Consent Decree or the CTPs. Plaintiffs agree that the incorporation of the terms of the Consent Decree, including CTPs, into a Title V permit may be accomplished through the minor modification procedures of 40 C.F.R. Part 70 or the state-specific rules adopted consistent with Part 70.

39. General Permitting Requirements.

(a). ADM shall submit timely and complete applications for all permits required to be obtained under this Consent Decree pursuant to the Clean Air Act and applicable State or local permitting requirements.

(b). For units not required to implement emission reduction projects under this Consent Decree, ADM shall have a period of 18 months from the date of lodging of the Consent Decree to apply for a permit or permit amendment imposing or modifying VOC and CO limits for units at the plants listed in Paragraphs 11 through 14. ADM's failure to submit full and complete applications for

these permits or permit amendments by the 18-month deadline may subject it to additional civil penalties and injunctive relief requirements. ADM shall submit a list of facilities for which applications for permits or permit amendments were filed in its January 30, 2005 semiannual report. This provision shall not extend any deadlines for submission of Title V permit applications.

**V. NSPS REQUIREMENTS APPLICABLE  
TO PLANTS SUBJECT TO THIS CONSENT DECREE**

40. By no later than January 30, 2005 (semiannual report), ADM shall identify the units (referred to as "affected facilities" for NSPS purposes) at plants subject to this Consent Decree for which ADM will accept NSPS applicability in the following categories:

(a). Steam generating units accepting applicability under 40 C.F.R. Part 60, Subpart Db (Industrial-Commercial-Institutional Steam Generating Units);

(b). Steam generating units accepting applicability under 40 C.F.R. Part 60, Subpart Dc (Small Industrial-Commercial-Institutional Steam Generating Units);

(c). Storage vessels accepting applicability under 40 C.F.R. Part 60, Subpart Kb (Volatile Organic Liquid Storage Vessels);

(d). Process units accepting applicability under 40 C.F.R. Part 60, Subpart VV (Equipment Leaks of VOC);

(e). Affected facilities at grain terminal and storage elevators accepting applicability under 40 C.F.R. Part 60, Subpart DD (Standards of Performance for Grain Elevators);

(f). Affected facilities at coal preparation plants accepting applicability under 40 C.F.R. Part 60, Subpart Y (Standards of Performance for Coal Preparation Plants); and

(g). Affected facilities accepting applicability under any other subpart of 40 C.F.R. Part 60.

41. Units Accepting Applicability:

(a) Units Subject to Immediate Compliance. By no later than January 30, 2005 (semiannual report), ADM shall submit its completed list of NSPS-applicable units to EPA and the appropriate state or local authority. ADM shall immediately comply with the requirements of the NSPS for those units accepting applicability.

(b) Units Subject to Compliance Schedule. By no later than January 30, 2005 (semiannual report), ADM shall submit a compliance schedule for review and approval by the appropriate Plaintiffs for any unit for which it accepts NSPS applicability but which is not in compliance with all applicable NSPS requirements. The approved compliance schedule is incorporated by reference herein and made enforceable under this Consent



Decree. Thereafter, ADM shall comply with the requirements of each compliance schedule, as approved, and shall demonstrate by the time specified in the compliance schedule that the unit covered by the schedule meets all applicable NSPS requirements.

42. Units Not Accepting Applicability:

(a) Information Requirement. For those units that fit the categories of Subparts Db, Dc, Y, DD, VV, or any other Subparts identified under Paragraph 40(g), but for which ADM does not accept applicability for the unit under NSPS, ADM shall provide in the report submitted under Paragraph 40 a description of the unit or class of units (e.g., "rest of process"), size and type, and approximate time period of construction. For those units that fit the category of Subpart Kb, ADM need not provide information relating to the following types of units:

(a) Process vessels;

(b) Vessels subject to 40 CFR Part 63, Subpart GGGG; and

(c) Vessels having a capacity of less than 20,000 gallons or containing a liquid that has a vapor pressure less than 3.5 kPa.

(b) Reservation of Plaintiffs' Claims. Those units for which ADM declines to accept NSPS applicability are beyond the scope of the release from liability set forth in Paragraph 126 ("Resolution of Claims") of this Decree, and Plaintiffs reserve their right to enforce NSPS claims related to those units.

**VI. GENERAL RECORDKEEPING AND REPORTING REQUIREMENTS**

43. Data Retention. ADM shall monitor all operating parameters required by each facility-specific CTP, and shall maintain records of this data in accordance with the retention requirements set forth in Paragraph 45.

44. Semiannual Reports. Beginning with the January 30, 2004 report, and semiannually thereafter, ADM shall submit written reports to EPA and the appropriate state or regional air authority. Each such report shall be due within thirty days after the end of each semiannual reporting period (January 1 through June 30, or July 1 through December 31, as applicable, except for the first report where the reporting period is from the date of lodging through December 31). The reports shall contain the following information for the most recent reporting period:

(a). The current schedule for compliance with the CTP requirements, including annual CTP schedule updates to be submitted with the semiannual reports required on January 30<sup>th</sup> of each year, which shall itemize all such requirements with the applicable deadline or milestone, the tasks that have been completed with date, and the future tasks (including permanent shutdown of any emission units) that have yet to be completed with expected date;

(b). For each unit for which an emission limit under this Consent Decree is in effect, information to support ADM's compliance status with such limit, including data for emissions or operational parameters, as required to be monitored, during the reporting period. For this purpose, monitored emissions data may be submitted to the appropriate Plaintiffs in electronic format as provided for by 40 C.F.R. Part 75; and

(c). Other information specifically required to be included in the semiannual reports pursuant the CTPs or this Consent Decree.

45. Record Retention. ADM shall preserve and retain all records and documents that reflect ADM's compliance with the requirements of this Consent Decree for a project required under this Consent Decree for a period of five (5) years following the demonstration of compliance for that project, unless other regulations require the records to be maintained longer, or unless otherwise agreed between ADM and the appropriate Plaintiffs.

46. Certification. ADM's semiannual reports shall contain the following certification and shall be signed by a plant manager, a corporate official responsible for plant management or a corporate official responsible for environmental management and compliance at the plant(s) covered by the report:

"I certify under penalty of law that I have personally examined the information submitted herein and that I have

made a diligent inquiry of those individuals immediately responsible for obtaining the information and that to the best of my knowledge and belief, the information submitted herewith is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Each such report and certification shall be reviewed and initialed by a corporate official at the vice presidential level or higher. If the signatory is such an official, the report and certification may be peer-reviewed and initialed.

#### **VII. COMPLIANCE PROGRAM FOR VEGETABLE OILSEED PLANTS**

**PROGRAM SUMMARY:** ADM shall reduce air emission of VOCs and HAPs by approximately 4,000 tons per year by lowering solvent losses at 26 vegetable oil extraction plants nationwide. ADM shall accomplish the reductions by upgrading existing equipment, adding new equipment, piloting innovative technology, and establishing a final VOC Solvent Loss Ratio (SLR) limit for each plant. ADM shall achieve compliance in accordance with the schedule set forth in the "Oilseed Control Technology Plans". ADM shall comply with interim emission limits at 12 plants and final emission limits for all 26 plants, as established under the Consent Decree. ADM shall incorporate all final limits in federally enforceable operating permits for each facility.

#### **A. INTERIM LIMITS**

47. By no later than 90 days following lodging of this Consent Decree, ADM shall begin to account for solvent loss and quantity of oilseeds processed to comply with the following VOC solvent loss ratio ("SLR") limits at the following nine plants:

Decatur, Illinois - Corn Germ

0.31 gal/ton

Goodland, Kansas - Sunflower	0.34
Mankato, Minnesota - Conventional Soybean	0.15
Memphis, Tennessee - Large Cottonseed	0.37
Mexico, Missouri - Conventional Soybean	0.18
Richmond, Texas - Small Cottonseed	0.25
Valdosta, Georgia - Conventional Soybean	0.15
Valdosta, Georgia - Large Cottonseed	0.30
Velva, North Dakota - Canola	0.33

The first compliance determination will be based on the first 12 operating months of data collected after the date on which ADM begins to account for solvent loss under this paragraph.

"Operating month" is defined according to the definition provided in 40 C.F.R. Part 63, Subpart GGGG.

48. By no later than April 12, 2003, ADM shall begin to account for solvent loss and quantity of oilseeds processed to comply with a VOC SLR limit of 0.20 gal/ton at the following three plants:

Fostoria, Ohio

Fremont, Nebraska

Lincoln, Nebraska

The first compliance determination will be based on the first 12 operating months of data collected after the date on which ADM begins to account for solvent loss under this paragraph.

**B. DECATUR EAST SPECIALTY SOYBEAN PLANT.**

**PROGRAM SUMMARY - WHITE FLAKE COOLER VENT PROJECT:** ADM shall implement a program with the goal of achieving a reduction of 90% or greater in VOC emissions from the white flake cooler vents for the white flake lines at the Decatur East Specialty Soybean Plant (Decatur East Plant). The program is described in detail in the Decatur East CTP, Attachment 10. The first step consists of piloting a Vacuum Assisted Desolventizing System (VADS) on one white flake line. If this technology meets the performance criteria in the CTP, ADM will install it on the other white flake lines. If it does not, ADM must conduct engineering evaluations and, if appropriate, a pilot program, directed toward identifying an alternative technology that is technologically and economically feasible, and meets the performance criteria. If such an alternative technology is identified, and has all necessary regulatory clearances under the Federal Food, Drug, and Cosmetic Act, ADM must install it on its white flake lines. The emission reduction benefits from this program would be addressed in the final SLR limit for the Decatur East Plant, which will be established pursuant to Paragraph 70.

49. By no later than 12 months following lodging of this Consent Decree, ADM shall install a Vacuum Assisted Desolventizing System ("VADS") on one of the three white flake lines at its Decatur East plant, that are currently equipped with flash desolventizer/deodorizer technology.

50. After start-up, ADM shall operate the VADS-equipped white flake line at representative operating conditions, in order to determine whether it is capable of meeting the performance criteria in the Decatur East CTP.

51. By no later than 21 months after lodging of this Consent Decree, ADM shall submit a report to EPA and the Illinois Environmental Protection Agency ("IEPA") on the evaluation of the VADS-equipped white flake line. The report shall include a determination whether the VADS-equipped white flake line is capable of meeting the performance criteria in the Decatur East CTP. Specifically, the report shall include solvent loss and crush data, monitoring data, and all assumptions and calculations used to estimate the emission reduction benefit of the VADS technology.

52. If it is determined that the VADS-equipped white flake line meets the performance criteria in the Decatur East CTP, ADM shall install a VADS on each of the other two white flake lines, or a single VADS on both lines, not later than one year after the determination required under Paragraph 51.

53. If it is determined that the VADS-equipped white flake line does not meet the performance criteria in the Decatur East CTP, ADM shall submit:

(a). In the report required under Paragraph 51, or a separate report if ADM requests and EPA approves an extension, an

evaluation of the technical feasibility, estimated control efficiency, and cost-effectiveness of alternate technologies for controlling VOC emissions from the white flake cooler vents for its white flake lines.

(b). In the report under Paragraph 51, ADM shall report whether the VADS is to remain in place, or be removed.

54. (a). Evaluation of Alternative Technologies: The evaluation of alternative technologies in the report required under Paragraph 53 shall include all potentially applicable technologies that are capable of reducing VOC emissions from the white flake cooler vents for a white flake line. The target control efficiency for each technology is 90%. Two of the technologies to be evaluated shall be:

1. a fluidized bed adsorption system using polymeric resin; and
2. a bioreactor system using engineered microorganisms.

ADM shall evaluate alternative control technologies with control efficiencies lower than 90% if it is determined that the control technology is technically feasible and cost-effective.

(b). Evaluation of Technical Feasibility: The technical feasibility portion of the evaluation report required by Paragraph 53 shall include a detailed engineering analysis of



each technology and focus on whether the technology can meet the performance criteria specified in the Decatur East CTP, and fire safety standards. The engineering analysis shall include, as appropriate, manufacturer's design specifications and performance criteria, any data from pilot or full-scale implementations of the technology that is relevant to this proposed evaluation, any estimates of emission reductions for each technology, and all calculations, assumptions and/or operating data used to estimate control efficiencies.

(c). Evaluation of Economic Feasibility: The cost effectiveness portion of the evaluation will be conducted on an annualized basis, in terms of cost per ton of reduced emissions, and submitted for EPA approval. The cost per ton estimates shall take into account all costs associated with the installation and implementation of the control measure in question, and may include costs associated with process and plant changes necessary to accommodate the control measures provided that the report also addresses any benefits to ADM from such changes. The report shall include detailed supporting information for the determination of the cost-effectiveness including all calculations and assumptions. For purposes of this Consent Decree, a cost effectiveness of less than \$5,000 per ton of VOC removed/recovered is presumptively cost effective, and a cost effectiveness of greater than \$10,000 per ton of VOC

removed/recovered is presumptively not cost effective. The report also shall evaluate whether these alternative technologies have all necessary clearances under the Federal Food, Drug and Cosmetic Act ("FFDCA"), where applicable.

55. If one or more of the alternative technologies is technically feasible, and is cost effective, the report under Paragraphs 51 and 53 shall include a plan for the installation of one of these alternative technologies on the white flake cooler vent for a white flake line, to evaluate whether it is capable of meeting the performance criteria in the CTP. That plan shall include an installation schedule with intermediate milestones.

56. If the technology selected for installation under Paragraph 55 does not have all necessary clearances under the FFDCA, ADM's plan for installation shall include a schedule for applying for such clearances. The plan shall provide for the installation of the technology only after obtaining such clearances, if it would be economically infeasible to produce food or feed that was not adulterated (within the meaning of the FFDCA).

57. The plan under Paragraph 55 shall also provide for operating the white flake line equipped with the alternative technology at representative operating conditions, to determine whether this alternative technology is capable of meeting the performance criteria in the CTP. By no later than 7 months after

installing the alternative technology, ADM shall submit a report to EPA and IEPA on this evaluation. The report shall include a determination whether the alternative technology-equipped white flake line is capable of meeting the performance criteria in the Decatur East CTP.

58. If it is determined that the alternative technology-equipped white flake line meets the performance criteria in the Decatur East CTP, the report under Paragraph 57 shall include a plan for implementing the technology on the other white flake line or other two white flake lines (if the VADS system has been removed, pursuant to Paragraph 53). The plan shall include an installation schedule, with interim milestones. If it is determined that the alternative technology does not meet the performance criteria in the CTP, ADM, EPA, and IEPA will meet to discuss control alternatives prior to dispute resolution.

**C. DECATUR WEST CONVENTIONAL SOYBEAN PLANT**

59. In accordance with the Decatur West CTP, ADM shall conduct the following emission reduction projects at its Decatur West conventional soybean plant:

(a). By no later than 12 months following lodging of this Consent Decree, ADM shall upgrade the desolventizer toaster/dryer cooler ("DTDC").

(b). ADM will install a new "once-through cold water" condenser following the vent condenser pursuant to the schedule in Paragraph 60. ADM will address emission reduction benefits from these projects in the final SLR limit for this plant, which will be established pursuant to the schedule and formula set out in Paragraph 66.

**D. CONDENSER UPGRADES**

60. By no later than the dates set forth in this Paragraph, ADM shall upgrade its oilseed plants so that all plants have condenser systems that include, at a minimum, a dedicated "extractor condenser" for the extractor and a once-through cold water condenser following the vent condenser. These condenser upgrades shall be completed on the following schedule:

11 plants (50%)	by April 1, 2004
16 plants (75%)	by April 1, 2005
21 plants (100%)	by April 1, 2006 <sup>1</sup>

Attachment 9, identifies the ADM plants that will receive these condenser upgrades.

**E. OILSEED RECORDKEEPING AND REPORTING**

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<sup>1</sup> or the first day of the plant's first normal operating period thereafter under 40 C.F.R. Part 63, Subpart GGGG, if the plant is not operating on April 1, 2006.

61. For all plants subject to interim or final VOC SLR limits, ADM shall maintain the records required by 40 C.F.R. Part 63, Subpart GGGG on solvent loss and quantity of oilseed processed.

62. For all plants subject to interim or final VOC SLR limits, ADM shall maintain the records required by 40 C.F.R. Part 63, Subpart GGGG, for any malfunction period as defined in Paragraphs 74 and 75 below.

63. Decatur West Project Report. By no later than 45 days after the lodging of this Consent Decree, ADM shall submit a report to the Plaintiffs that specifies the DTDC improvement project details and the completion date to demonstrate that the deadline in Paragraph 59 has been met.

64. Condenser Project Reports. In the semiannual reports due on July 30th of 2004, 2005 and 2006, ADM shall submit reports to Plaintiffs identifying the plants at which upgraded condenser systems have been installed since the last reporting period and ADM's tentative projections for the remaining installations, to demonstrate that the deadlines in Paragraph 60 have been and will be met. For any plant not operating on April 1, 2006, the report shall be submitted 30 days after the installation deadline under Paragraph 60.

65. Control Technology and Technique Report. By no later than 21 months after lodging of this Consent Decree, ADM shall

submit a report to EPA describing technologies and techniques it has implemented for controlling VOC emissions at oilseed plants, for use by the Plaintiffs to foster the transfer of such techniques and technology across the industry. The report shall include the following information for one of each category of oilseed plant for which final VOC SLR limits are required under Paragraphs 66 through 70, and at which a project has been completed:

- (1) a brief characterization of each plant (e.g., oilseed type, crush throughput);
- (2) emission reduction projects;
- (3) project costs;
- (4) emission reductions resulting from these projects; and
- (5) the basis for the emission reduction and cost estimates.

The report, at a minimum, shall address the technologies and techniques identified in Paragraphs 49 through 60 above that were implemented. The report may include Confidential Business Information ("CBI") in a separate section where such information is deemed necessary to proper understanding of the technologies by the Plaintiffs.

**F. FINAL PERMIT LIMITS**

66. By no later than December 31, 2007, ADM shall propose in writing to the Plaintiffs final VOC SLR limits for each oilseed plant (except the Decatur East plant) that satisfy the requirements of Paragraphs 67 through 69. Final VOC limits for plants subject to interim limits may be higher than, lower than,

or the same as the interim limits, provided that the requirements of this Consent Decree are satisfied. For a plant that has an existing permit limit lower than the applicable solvent loss factor ("SLF") in 40 C.F.R. Part 63, Subpart GGGG (vegetable oil production NESHAP), ADM may not propose a Final SLR limit that is greater than the existing limit. For each oilseed plant, the first compliance determination will be based on the first 12 operating months of data collected after the date on which each VOC SLR limit is proposed.

67. The capacity-weighted average of the Final SLR limits shall not exceed the following limits for each oilseed group:

0.175 gal/ton for conventional soybean plants

0.33 gal/ton for large cottonseed plants

0.35 gal/ton for canola and small cottonseed plants

0.30 gal/ton for corn germ and sunflower plants.

The Oilseed CTP, Attachment 9, identifies the ADM plants that fall within each oilseed group, and provides the formula for calculating the capacity-weighted averages of the Final SLR limits for each oilseed category.

68. These capacity-weighted averages shall be based on the design capacity for each facility. By no later than 90 days following lodging of this Consent Decree, ADM shall submit, for approval by EPA and the appropriate Plaintiffs, the design capacity values for each plant in the categories listed in

Paragraph 67. ADM shall not use a value higher than the approved design capacity value without the approval of EPA and the appropriate Plaintiff. For purposes of this Consent Decree, design capacity is the "maximum permitted crush capacity" that a plant is allowed to process in a given time period under its operating permit, or, if no limit is included in the operating permit, the facility's maximum physical capacity. This number shall be expressed as "tons of crush per day."

69. For plants that process multiple seed types, the VOC SLR limit shall be 90% of the Solvent Loss Factor ("SLF") under 40 C.F.R. Part 63, Subpart GGGG, § 63.2840(a)(1) for a multiple seed plant. These plants include:

- (a). Enderlin, North Dakota (canola, soy, and sunflower)
- (b). Lubbock, Texas (corn germ, cottonseed, and peanuts)
- (c). Red Wing, Minnesota (canola, flax, and sunflower)

70. ADM shall propose a final VOC SLR limit for the Decatur East specialty soybean plant, not later than two and one-half years (30 calendar months) after: (1) completing installation of the last emission reduction project pursuant to Paragraphs 49 through 58 above; or (2) a determination that no emission reduction project beyond a pilot scale installation is required under Paragraphs 49 through 58. The final VOC SLR limit shall be based upon at least two years of data (unless ADM determines that less operating data is necessary), process variability, a



reasonable certainty of compliance, and all other available and relevant information. EPA and IEPA will review the Final SLR limit proposed by ADM and will either: (a) Approve ADM's proposed SLR limit, or (b) Propose an alternate SLR limit based on the information and data submitted pursuant to this paragraph.

71. Immediately upon proposal, ADM shall begin to account for solvent loss and quantity of oilseeds processed to comply with proposed final VOC SLR limits. For each oilseed plant, the first compliance determination will be based on the first 12 operating months of data collected after the date on which each VOC SLR limit is proposed. Plaintiffs will review the Final SLR limits proposed by ADM and will either: (a) Approve ADM's proposed SLR limits, or (b) Propose an alternate SLR limit(s) based on the information and data submitted pursuant to this paragraph. If a final VOC SLR limit is established pursuant to this Consent Decree for a plant that is different from the proposed limit, ADM shall begin to account for solvent loss and quantity of oilseed processed to comply with that limit on the date that it has been approved by the appropriate Plaintiffs. For each oilseed plant, the first compliance determination will be based on the first 12 operating months of data collected after the date on which the Final SLR limit is approved.

72. Within 90 days after proposal of the Final SLR limits, ADM shall apply to the appropriate permitting authority for the

appropriate federally enforceable operating permits which incorporate these limits.

**G. DEMONSTRATION OF COMPLIANCE**

73. Solvent Loss Limits. Compliance with the interim and final VOC SLR limits in this Consent Decree shall be determined in accordance with 40 C.F.R. Part 63, Subpart GGGG, with the following exceptions: (1) provisions pertaining to HAP content shall not apply; (2) monitoring and recordkeeping of solvent losses at each plant shall be conducted daily; (3) solvent losses and quantities of oilseed processed during startup and shutdown periods shall not be excluded in determining solvent losses; and (4) records shall be kept in the form of the table in Attachment 13, that show total solvent losses, solvent losses during malfunction periods, and adjusted solvent losses (i.e., total solvent losses minus malfunction losses) monthly and on a twelve-month rolling basis.

74. Malfunctions. ADM may apply the provisions of 40 C.F.R. Part 63, Subpart GGGG pertaining to malfunction periods only when the conditions in both subparagraph (i) and (ii) are met:

(i) The malfunction results in a total plant shutdown. For purposes of this Consent Decree, a "total plant shutdown" means a shutdown of the solvent extraction system.

(ii) Cumulative solvent losses during malfunction periods at a plant do not exceed 4,000 gallons in a 12-month rolling period. At all other times, ADM must include all solvent losses when determining compliance with its interim or final VOC SLR limits at each plant.

75. During a malfunction period, ADM shall comply with the Startup, Shutdown, Malfunction ("SSM") Plan as required under Subpart GGGG for the plant. The solvent loss corresponding to a malfunction period will be calculated as the difference in the total solvent inventories for the day before the malfunction period began and the day the plant resumes normal operation.

#### **H. QUINCY, ILLINOIS COAL BOILERS**

76. ADM's Quincy, Illinois Coal-fired boilers 1 and 2 must comply with a NOx emissions limit of 0.43 lbs/MMBtu which will be incorporated into the applicable state operating permit as soon as practicable. Compliance with this limit will be measured in the common stack from these units. ADM will conduct two compliance tests (i.e., three one-hour measurements using Methods 3A and 7E) on these units with one test during the 2003 or 2004 ozone season and one in the winter months between the two ozone seasons.

I. CONSTRUCTION PERMITS AND WAIVERS, GENERAL PERMITTING REQUIREMENTS

77. General Permitting Requirements.

(a). ADM shall seek to obtain all appropriate construction permits or permit waivers for emission reduction projects undertaken to comply with interim or final VOC SLR limits, as determined in accordance with the rules and practice of the appropriate permitting authority.

(b). For units not subject to control requirements under this Consent Decree, ADM shall have a period of 18 months from the date of lodging of the Consent Decree to apply for a permit or permit amendment imposing or modifying VOC and CO limits for units at the plants listed in Paragraphs 7 through 9. ADM's failure to apply for these permits or permit amendments by the 18-month deadline may subject it to additional civil penalties and injunctive relief requirements. This provision shall not extend any deadlines for submission of Title V permit applications.

(c). Reopening or reactivation of the plants identified as "now closed" in Paragraphs 7, 8 and 9 shall constitute new construction or modification of a stationary source subject to applicable permitting requirements of the SIP, including PSD.

78. ADM shall maintain the monitoring data and records as required in each of the CTPs, and shall make them available to the Plaintiffs upon demand as soon as practicable.

#### **VIII. NAAQS MODELING IN IOWA**

79. ADM shall submit NAAQS modeling to Iowa DNR as follows: (1) Cedar Rapids Corn Processing Plant (SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>10</sub>) within one year from date of lodging of this Consent Decree; (2) Clinton Corn Processing Plant (PM<sub>10</sub> only) within one year from date of lodging; (3) Des Moines Soybean Processing Plant ((SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>10</sub>) within five years from date of lodging; and (4) Keokuk Wheat Gluten Plant (SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>10</sub>) within five years from date of lodging.

#### **IX. ENVIRONMENTAL AUDITS**

80. ADM shall conduct a comprehensive review of the compliance status of each of the plants listed in paragraphs 7 through 14 of this Consent Decree (hereinafter "Audit Program") a minimum of twice during the life of the Decree. The Audit Program will evaluate each plant's compliance with this Decree and the following federal statutes and their implementing regulations and permits: the Clean Air Act, the Clean Water Act, 33 U.S.C. § 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq., and the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11001 et seq. ADM may

utilize its existing (January 2003) corporate environmental audit program, which has been reviewed by the Plaintiffs, to meet this requirement.

**X. CIVIL PENALTY**

81. Within thirty (30) calendar days of entry of this Consent Decree, ADM shall pay to the Plaintiffs a civil penalty pursuant to Section 113 of the Act, 42 U.S.C. § 7413, in settlement of Clean Air Act claims in the amount of \$4,604,000.

82. Of the total civil penalty owed, ADM shall pay \$4,213,600 to resolve national Clean Air Act claims. Of the civil penalty amount applicable to national claims, \$2,505,600.00 shall be paid to the United States by Electronic Funds Transfer ("EFT") to the United States Department of Justice, in accordance with current EFT procedures, referencing the USAO File Number and DOJ Case Number 90-5-2-1-2035/2, and the civil action case name and case number of the Central District of Illinois. The costs of such EFT shall be ADM's responsibility. Payment shall be made in accordance with instructions provided to ADM by the Financial Litigation Unit of the U.S. Attorney's Office in the Central District of Illinois. Any funds received after 11:00 a.m. (EST) shall be credited on the next business day. ADM shall provide notice of payment, referencing the USAO File Number and DOJ Case Number 90-5-2-1-2035/2, and the civil action case name and case

number, to the Department of Justice and to EPA, as provided in Paragraph 133 ("Notice").

83. Of the total civil penalty applicable to national claims, the amount of \$1,708,000 shall be divided among the state and local air authorities which have filed Complaints in Intervention and joined in the claims alleged by the United States in this action. ADM shall make payment as follows:

- (a) \$122,000.00 to the Arkansas Department of Environmental Quality.
- (b) \$61,000.00 to the State of Indiana.
- (c) \$305,000.00 to the State of Illinois.
- (d) \$122,000.00 to the State of Iowa.
- (e) \$61,000.00 to Linn County, Iowa.
- (f) \$61,000.00 to Polk County, Iowa.
- (g) \$122,000.00 to the State of Kansas.
- (h) \$183,000.00 to the State of Minnesota.
- (i) \$122,000.00 to the State of Missouri.
- (j) \$122,000.00 to the State of Nebraska.
- (k) \$61,000.00 to Lancaster County, Nebraska.
- (m) \$183,000.00 to the State of North Dakota.
- (n) \$61,000.00 to the State of South Carolina.
- (o) \$122,000.00 to the State of Texas. Of the payment to the State of Texas, the sum of \$15,000 shall be deemed reasonable attorneys' fees for the Attorney General of Texas, and the

balance of \$107,000.00 shall be deemed civil penalties under state law.

Payment shall be made according to the instructions set forth in Attachment 1 to this Consent Decree (Notice and Penalty Payment Provisions).

84. Within thirty (30) calendar days of entry of this Consent Decree, ADM shall pay to the States of Arkansas, Iowa, Illinois, Nebraska, North Dakota and South Carolina civil penalties in settlement of state-specific Clean Air Act claims in the following amounts:

(a) \$70,000.00 (seventy thousand dollars) to the Arkansas Department of Environmental Quality.

(b) \$66,500.00 (sixty six thousand five hundred dollars) to the State of Illinois.

(c) \$100,000.00 (one hundred thousand dollars) to the State of Iowa.

(d) \$50,000.00 (fifty thousand dollars) to the State of Nebraska.

(e) \$28,900.00 (twenty eight thousand nine hundred dollars) to the state of North Dakota.

(f) \$75,000.00 (seventy five thousand dollars) to the State of South Carolina.

85. ADM shall pay statutory interest on any overdue civil penalty or stipulated penalty amount at the rate specified in 31



U.S.C. § 3717. Upon entry, this Consent Decree shall constitute an enforceable judgment for purposes of post-judgment collection in accordance with Rule 69 of the Federal Rules of Civil Procedure, the Federal Debt Collection Procedure Act, 28 U.S.C. § 3001-3308, and applicable state law. The Plaintiffs shall be deemed a judgment creditor for purposes of collection of any unpaid amounts of the civil and stipulated penalties and interest.

86. No amount of the civil penalty to be paid by ADM shall be used to reduce its federal or state tax obligations.

#### XI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

87. By no later than December 31, 2005, ADM shall spend \$6,050,000.00 to implement the Supplemental Environmental Projects ("SEPs") required under this Consent Decree in accordance with the following requirements:

(a). By no later than July 1, 2003, ADM shall submit to the appropriate Plaintiffs for review and approval detailed work plan(s) to implement the SEPs. ADM's SEP work plans shall describe the nature, scope and goals of the projects, where they are to be implemented, and the implementation schedules.

(b). For the SEPs described in Paragraph 88, ADM work plans shall conform to the requirements of EPA's Supplemental Environmental Projects Policy (eff. May 1, 1998).

(c). ADM's SEP work plans shall be approved by the appropriate Plaintiffs provided they meet the requirements of this Section.

(d). ADM's SEP work plans submitted and approved under this Section are incorporated by reference herein and made directly enforceable under this Consent Decree.

88. Diesel Bus Retrofit Project -

(a). ADM shall perform a diesel bus retrofit project which will consist of retrofitting catalytic control devices on diesel buses to minimize the emissions of NOx and PM. The project shall be designed to benefit sensitive populations within the geographic area in which the ADM plants are located. ADM may carry out its responsibilities on the SEP directly or through contractors selected by ADM. ADM may consult EPA on selection of a contractor or contractors, but the decision to select any contractor will be ADM's right and responsibility, and is not subject to EPA approval.

(b). If ADM does not receive acceptable contractor proposals for the SEP, ADM shall consult with the United States on an alternative SEP or SEPs.

(c). In addition to the requirements of Paragraph 87, the work plan for this SEP shall include a schedule for completion of

the SEP, but with a completion date of no later than December 31, 2005.

(d). ADM shall spend at least \$1,100,000.00 on the diesel retrofit project. ADM shall insure that all contractor administrative costs, including development and oversight costs, related to the SEP are reasonable and necessary for the satisfactory completion of the SEP.

(e). For purposes of this SEP, "satisfactory completion" shall mean spending the full amount of money agreed to for this project. Costs incurred for internal ADM personnel, or by entities in which ADM has a financial interest, in the development and oversight of the SEP may not be credited against the \$1.1 million spending requirement.

(f). If for any reason ADM expends less than the full amount, ADM shall pay the balance of unexpended funds in accordance with the payment requirements set forth in Paragraph 82, within thirty (30) days of receipt of written notification of the unexpended funds from the United States.

89. ADM shall also perform the following state SEPs:

(a). Illinois. In order to promote the goals of the Illinois Environmental Protection Act, 415 ILCS 5/2 (b) 2002, "to restore, protect and enhance the quality of the environment" within the State of Illinois, within thirty (30) days of entry of this

Consent Order, ADM shall make the payments as specified and directed below to implement these Supplemental Environmental Projects within the State of Illinois:

1. \$2,300,000.00 to the Illinois EPA Special State Projects Fund for the "Illinois Green School Bus Program", which \$2,300,000.00 shall be used by Illinois EPA for the following activities: aftermarket retrofit of existing buses with particulate filters or oxidation catalysts; fuel differential costs associated with the use of ultra-low sulfur diesel fuel ("clean diesel"), cleaner biodiesel fuel and other clean alternative fuels; the purchase of new buses equipped with advanced clean technology engines to replace older buses. The Illinois EPA shall use the \$2,300,000.00 to fund the specified activities for school buses owned and operated by school districts within the Illinois counties of Macon, Peoria, Christian, Adams, or Knox, or any county bordering upon these five counties;

2. \$250,000.00 to the Illinois EPA Special State Projects Fund for distribution to local nonprofit watershed management organizations, designated by the Illinois EPA, to fund natural resource restoration and water quality enhancement activities in the State of Illinois;

3. \$1,000,000.00 to the Illinois Attorney General's State Projects and Court Ordered Distribution Fund, to be utilized for future environmental enforcement activities in the State of Illinois;

4. \$1,000,000.00 to the Illinois Conservation Foundation, ("ICF"), 20 ILCS 880/15 2000, to assist the ICF in the acquisition and/or restoration of endangered habitat by the State of Illinois within the Illinois counties of Macon, Peoria, Christian, Adams, or Knox, or any county bordering upon these five counties, for wetland preservation, water quality protection and/or wildlife conservation purposes and to provide for public use of the acquired areas in a manner consistent with the ecology and historic uses of the area. The ICF shall consult with and coordinate any such land acquisition projects with the Illinois Department of Natural Resources, and, at a minimum, the not for profit conservation organizations: Ducks Unlimited, the State of Illinois Chapter of the National Wild Turkey Federation, and The Nature Conservancy; and

5. \$50,000.00 to the Midwest Environmental

Enforcement Association, to be utilized for environmental enforcement training to governmental personnel responsible for environmental enforcement within the State of Illinois.

(b). Kansas. ADM shall fund restoration activities at the McPherson Wetlands in Kansas, in accordance with Kansas state law. ADM shall spend at least \$200,000.00 on this SEP. If for any reason ADM expends less than \$200,000, ADM shall pay the balance of unexpended funds in accordance with the payment requirements set forth in Attachment 1 to this Consent Decree, within thirty (30) days of receipt of written notification of the unexpended funds from the appropriate Plaintiffs.

(c). South Carolina. ADM shall reduce emissions of particulate matter through the application of fabric filter (baghouse) technology to the Escher-Wyss dryer at its oilseed plant in Kershaw, South Carolina. The SEP workplan under Paragraph 87 shall include provisions that require establishment of an emission limit. The workplan shall also include, and South Carolina shall allow, provisions for downtime allowance for repair and maintenance of the fabric filter. The downtime allowance provisions shall provide for continued operation of the existing cyclone during any such downtime. ADM shall spend at least \$150,000.00 on this SEP. If for any reason ADM expends less than \$150,000, ADM shall pay the balance of unexpended funds in

accordance with the payment requirements set forth in Attachment 1 to this Consent Decree, within thirty (30) days of receipt of written notification of the unexpended funds from the appropriate Plaintiffs.

90. ADM hereby certifies that, as of the date of this Consent Decree, ADM is not required to perform or develop the SEPs specified in this Section by any federal, state or local law or regulation; nor is ADM required to perform or develop such SEPs by any other agreement, grant or as injunctive relief in this or any other case. ADM further certifies that it has not received, and is not presently negotiating to receive, and will not receive in the future, credit in any other enforcement action for such SEPs.

91. SEP Report. For each SEP completed under this Section during a particular semiannual period, ADM shall provide, as part of the semiannual report for that period, a SEP Completion Report certified in accordance with Paragraph 46 of this Consent Decree and containing the following information:

- (a) A detailed description of the SEP as implemented;
- (b) A description of any pre-report operating problems encountered and the solutions thereto;
- (c) An accounting of all costs incurred for the purpose of implementing the SEP. ADM shall provide, upon request, copies of the invoices, receipts, purchase orders, or other documentation that specifically identifies and itemizes the

individual cost or the goods and/or services for which payment is being made. Canceled drafts do not constitute acceptable documentation unless such drafts specifically identify and itemize the individual costs of the goods and/or services for which payment is being made, and

(d) A certification that the SEP has been satisfactorily completed.

92. Acceptance of SEP Report. (a) After receipt of the SEP Completion Report described in Paragraph 91 above, the appropriate Plaintiffs will notify ADM, in writing, regarding: (i) any deficiencies in the SEP Report itself along with a grant of an additional thirty (30) days for ADM to correct any deficiencies; or (ii) indicate that the appropriate Plaintiffs conclude that the project has been completed satisfactorily; or (iii) determine that the project has not been completed satisfactorily and seek stipulated penalties in accordance with Paragraph 99 herein.

(b) If the appropriate Plaintiffs elect to exercise option (i) above, i.e., if the SEP Report is determined to be deficient but Plaintiffs have not yet made a final determination about the adequacy of SEP completion itself, it shall permit ADM the opportunity to object in writing to the notification of deficiency given pursuant to this paragraph within ten (10) days of receipt of such notification.



(c) The appropriate Plaintiffs and ADM shall have an additional thirty (30) days from the receipt of the appropriate Plaintiffs' notification of objection to reach agreement on changes necessary to the SEP Report. If agreement cannot be reached on any such issue within this thirty (30) day period, the appropriate Plaintiffs shall provide a written statement of its decision on the adequacy of the completion of the SEP to ADM.

93. In any public statement regarding the funding of SEPs implemented under this Decree, ADM shall clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged environmental violations. ADM shall not be able to use or rely on the emission reductions generated as a result of its performance of the SEPs in any federal or state emission averaging, banking, trading, netting or similar emission compliance program.

94. This Consent Decree shall not relieve ADM of its obligation to comply with all applicable provisions of federal, state or local law during the implementation of these SEPs, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state or local permit, nor shall it be construed to constitute Plaintiffs approval of the equipment or technology installed by ADM in connection with the SEPs undertaken pursuant to this Consent Decree.

95. Until its completion, ADM shall include a description of the status of each SEP's implementation in its semiannual reports submitted pursuant to Paragraph 44 of this Consent Decree.

## **XII. STIPULATED PENALTIES**

96. ADM shall pay stipulated penalties to the United States and to the appropriate Plaintiff-Intervener (where the violation is at a specific facility), split 50% to each, for ADM's failure to comply with the terms of this Consent Decree, provided, however, that the United States may elect to bring an action for contempt in lieu of seeking stipulated penalties for violations of this Consent Decree. As applied below, "a week" shall mean any consecutive 7-day period, and "a month" shall mean any consecutive 30-day period. The stipulated penalties shall be determined as follows:

97. Requirement to Pay a Civil Penalty and to Escrow Stipulated Penalties.

(a) For failure to timely pay the civil penalty as specified in Section IX of this Consent Decree, ADM shall pay an additional \$30,000 per week that full payment is delayed plus interest on the amount overdue at the rate specified in 31 U.S.C. § 3717.

(b) For failure to escrow stipulated penalties as required by Paragraph 105, \$1,425 per day.

98. Failure to install air pollution control devices.

For failure to meet any interim or final deadline for installation of air pollution control devices, as specified in any schedule for installation required to be submitted under the CTPs, per day:

1st through 30th day after deadline - \$ 1,250

31<sup>st</sup> through 60<sup>th</sup> day after deadline - \$ 3,000

Beyond 60 days - \$6,000

99(a). Requirements to conduct initial compliance demonstrations for an air pollution control device.

For failure to conduct initial compliance demonstrations of an air pollution control device, by the deadlines specified in the CTPs, per day, per demonstration:

1st through 30th day after deadline - \$ 1,000

31<sup>st</sup> through 60th day after deadline - \$ 2,000

Beyond 60th day after deadline - \$ 5,000

99(b). Requirements to submit "Emission Reduction Project Initial Report."

For failure to submit a complete "Emission Reduction Project Initial Report" by the deadline specified in Paragraph 36 A. of the Decree, per week of delay, per report, \$1,000.

99(c). Requirement to monitor operating parameters for an air pollution control device on a unit.

For failure to monitor operating parameters for an air pollution control device on a unit, as required under Paragraph 32 of the Consent Decree, per day, per calendar quarter, per device not monitored:

For four to ten days per calendar quarter - \$ 1,500.00

For eleven through twenty days per calendar quarter -  
\$2,500.00

For greater than twenty days per calendar quarter - \$3,750.00

99(d). Requirements to operate the air pollution control devices installed on a unit within established parameters.

For failure to operate, as required under Paragraph 36 B. of the Consent Decree, air pollution control device within the parameters established pursuant to the CTPs, per day for each unit and emission parameter:

For two to six days per calendar month - \$ 1,500.00

For seven through twelve days per calendar month - \$2,500.00

For greater than twelve days per calendar month - \$3,750.00

99(e). Requirements to install CEMS.

For failure to install CEMS on appropriate projects by the deadlines specified in Paragraph 33, per CEMS not timely installed, \$2,500.00 per the first full month of delay, and \$2,500.00 per each subsequent month of delay, or fraction thereof.

99(f). Requirements to certify CEMS.

For failure to certify required CEMS in accordance with the requirements of the CTPs by the deadlines specified in Paragraph 33 of the Decree, per CEM not timely certified, \$2,500.00 per the first full month of delay, and \$2,500.00 per each subsequent month of delay, or fraction thereof.

99(g). Requirements to operate CEMS.

For failure to operate required CEMS in accordance with the requirements of the CTPs, per CEM not operated, or not properly operated, \$100.00 per day.

99(h). Failure to comply with a proposed emission limit.

For failure to comply with the proposed emission limit under Paragraph 36B., per day for each unit:

For one through three days per calendar month - \$1,500.00

For four through ten days per calendar month - \$2,500.00

For greater than ten days per calendar month - \$5,000.00

99(i). Failure to demonstrate compliance with a final emission limit.

For failure to demonstrate compliance with the final emission limit under Paragraph 36B., per day for each unit:

For one through three days per calendar month - \$1,500.00

For four through ten days per calendar month - \$2,500.00

For greater than ten days per calendar month - \$5,000.00

99(j). Failure to meet interim SLR emission limits at oilseed plants.

For failure to meet any of the interim SLR emission limits specified in Paragraph 47, per plant:

For each exceedance of a 12-month rolling average - \$20,000.

99(k). Failure to propose final SLR limits for oilseed plants.

For failure to propose final plant-specific SLR emission limits for oilseed plants by the deadline specified in Paragraph 70, \$715.00 per day of delay.

99(l). Failure to apply for permits incorporating the final SLR limits for oilseed plants.

For failure to submit complete applications for state operating permits incorporating the final plant-specific SLR

emission limits for oilseed plants by the deadline specified in Paragraph 72, \$1,000 per the first full week of delay, and \$1,000.00 per each subsequent week of delay, or fraction thereof.

99(m). Failure to meet final SLR emission limits at oilseed plants.

For failure to meet any of the final SLR emission limits established pursuant to Paragraph 73, per plant:

For each exceedance of a 12-month rolling average - \$30,000.

99(n). Failure to apply for permits incorporating emission limits and other requirements.

For failure to comply with the requirements of Paragraph 37, per permit, \$1,000.00 per the first full week of delay, and \$1,000.00 per each subsequent week of delay, or fraction thereof.

99(o). Failure to conduct NSPS Assessment.

For failure to submit to Plaintiffs the assessments of applicability of the NSPS Subparts specified in Paragraph 40 by the deadline specified in that Paragraph, \$5,000.00 per the first full month of delay, and \$5,000.00 per each subsequent month of delay, or fraction thereof.

99(p). Failure to maintain compliance with applicable NSPS requirements for an affected facility.

For failure to maintain compliance with NSPS requirements after accepting applicability pursuant to Paragraph 41(a), per day of noncompliance, per affected facility;

For one to thirty days - \$1,500.00

For thirty one through 60 days - \$2,000.00

For greater than sixty days - \$3,000.00

99(q). Failure to demonstrate compliance with applicable NSPS requirements for an affected facility subject to a Compliance Schedule.

For failure to demonstrate compliance with NSPS requirements by the applicable deadline for an affected facility subject to a compliance schedule under Paragraph 41(b), per day of noncompliance, per affected facility:

For one to thirty days - \$1,500.00

For thirty one through 60 days - \$2,000.00

For greater than sixty days - \$3,000.00

99(r). Failure to submit semiannual reports.

For failure to submit complete and properly certified semiannual reports, according to the deadlines established in Paragraph 44 of the Consent Decree, per day of delay, per report:

1st through 30<sup>th</sup> day after deadline - \$ 200.00



31st day through 60<sup>th</sup> day after deadline - \$ 500.00

Beyond 60<sup>th</sup> day after deadline - \$ 1,000.00

99(s). Requirements to submit reports under Section VII  
(Compliance Program for Vegetable Oilseed Plants).

For failure to submit complete reports by the deadlines specified in Section VII of the Decree, \$1,000.00 per the first full week of delay, and \$1,000.00 per each subsequent week of delay, or fraction thereof.

99(t). Failure to preserve and retain records.

For failure to preserve and maintain the records specified for the time period specified in Paragraph 45 of the Decree:

Per record not retained: \$ 500.00

99(u). Failure to meet the SEP Requirements under  
Section XI.

(1) For failure to "satisfactorily complete" the diesel retrofit SEP, as defined in Paragraph 88, ADM shall pay the shortfall as provided in Paragraph 88 and pay a stipulated penalty to the United States in the amount of \$100,000.

(2) For failure to submit the SEP workplan, per day, for each day after the report is due:

1st through 15th day after deadline - \$ 1,000

16<sup>th</sup> through 30th day after deadline - \$ 2,000

Beyond 30th day after deadline - \$ 3,000

100. For Failure to Demonstrate Compliance with the Tonnage Reduction Requirements.

For each failure to demonstrate compliance with the requirements of Subparagraphs (a) through (d) of Paragraph 28 by the applicable deadlines, in accordance with Subparagraph (e) of Paragraph 28, \$1,000 per day, retroactive to the deadline for achievement of the tonnage reduction specified in the relevant Subparagraph, and continuing until such time as ADM submits test data demonstrating compliance.

101. [reserved]

102. Penalties shall begin to accrue on the day after complete performance is due or the day a violation occurs, and shall continue to accrue through the date of completion of performance or the date of demonstrated compliance. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for each separate violation of this Consent Decree. Penalties shall accrue regardless of whether the appropriate Plaintiffs have notified ADM of a violation or made a stipulated penalty demand.

103. All penalties owed under this Section shall be due and payable within thirty (30) days of ADM's receipt from the appropriate Plaintiffs of a written demand for payment of the penalties, unless ADM invokes the dispute resolution procedures under Section XII. Such a written demand will describe the violation and will indicate the amount of penalties due. The amount of any stipulated penalties will be apportioned 50%-50% between the United States and the appropriate Plaintiffs, and shall be paid according to the procedures set out in Attachment 1 (Notice and Penalty Payment Procedures).

104. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31<sup>st</sup>) day after ADM's receipt of EPA's and the appropriate Plaintiffs demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. Section 3717, an additional penalty of 6% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) or more days.

105. Should ADM dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of the stipulated penalty for failure to pay a penalty due to the United States and the appropriate Plaintiffs by placing the disputed amount demanded by the United States and appropriate Plaintiffs, not to exceed \$50,500 for any given event or related series of

events at any one facility, in a commercial escrow account pending resolution of the matter and by invoking the Dispute Resolution provisions of Section XII within the time provided in this Paragraph for payment of stipulated penalties. If the dispute is thereafter resolved in ADM's favor, the escrowed amount plus accrued interest shall be returned to ADM; otherwise the appropriate Plaintiffs shall be entitled to the escrowed amount that was determined to be due by the Court plus the interest that has accrued on such amount, with the balance, if any, returned to ADM.

106. The Plaintiffs reserve the right to pursue any other remedies to which they may be entitled, including, but not limited to, additional injunctive relief for ADM's violations of this Consent Decree. Nothing in this Consent Decree shall prevent the Plaintiffs from pursuing a contempt action against ADM and requesting that the Court order specific performance of the terms of the Decree, or from seeking civil penalties for violations of the Decree that are also violations of any applicable statute or regulation.

107. The Plaintiffs will not seek stipulated penalties and civil penalties for the same violation of the Consent Decree.

### **XIII. RIGHT OF ENTRY**

108. Any authorized representative of EPA or an appropriate federal, state or local air pollution control authority, including independent contractors, upon presentation of proper credentials, shall have a right of entry upon the premises of ADM's facilities identified herein in Paragraphs 7 through 14 at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting facility equipment, and inspecting and copying all records maintained by ADM required by this Consent Decree. Nothing in this Consent Decree shall limit the authority of the Plaintiffs to conduct tests and inspections under Section 114 of the Act, 42 U.S.C. § 7414, and any other applicable federal or state law.

### **XIV. FORCE MAJEURE**

109. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, ADM shall notify the appropriate Plaintiffs in writing as soon as practicable, but in any event no later than ten (10) business days of when ADM first knew of the event or should have known of the event by the exercise of due diligence. In this notice ADM shall specifically reference this Paragraph of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and the measures taken or to be taken by ADM to prevent or minimize the

delay and the schedule by which those measures will be implemented. ADM shall adopt all reasonable measures to avoid or minimize such delays.

110. Failure by ADM to provide timely notice to the appropriate Plaintiffs of an event which causes or may cause a delay or impediment to performance shall render this Section XIV voidable by the Plaintiffs as to the specific event for which ADM has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

111. The United States shall notify ADM in writing regarding ADM's claim of a delay or impediment to performance as soon as practicable, but in any event within thirty (30) days of receipt of the Force Majeure notice provided under Paragraph 109. If the United States and the appropriate Plaintiffs agree that the delay or impediment to performance has been or will be caused by circumstances beyond the control of ADM, including any entity controlled by ADM, and that ADM could not have prevented the delay by the exercise of due diligence, the parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances. ADM shall not be liable for stipulated penalties for the period of any such delay.

112. If the Plaintiffs do not accept ADM's claim that a delay or impediment to performance is caused by a force majeure

event or the parties cannot agree on the duration of an extension for a force majeure event, to avoid payment of stipulated penalties, ADM must submit the matter to this Court for resolution within twenty (20) business days after receiving notice of the Plaintiffs' position, by filing a petition for determination with this Court. Once ADM has submitted this matter to this Court, the Plaintiffs shall have twenty (20) business days to file their response to said petition. If ADM submits the matter to this Court for resolution and the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of ADM, including any entity controlled by ADM, and that ADM could not have prevented the delay by the exercise of due diligence, ADM shall be excused as to that event(s) and delay (including stipulated penalties), for a period of time equivalent to the delay caused by such circumstances. In the event that the United States and the appropriate Plaintiff-Intervener are unable to reach agreement with regard to ADM's force majeure claim, the position of the United States shall be the Plaintiffs' final position.

113. ADM shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that ADM could not have prevented the delay by the exercise of due diligence. ADM shall also bear the burden

of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date based on a particular event may, but does not necessarily, result in an extension of a subsequent compliance date or dates.

114. Unanticipated or increased costs or expenses associated with the performance of ADM's obligations under this Consent Decree shall not constitute circumstances beyond the control of ADM, or serve as a basis for an extension of time under this Part. However, failure of a permitting authority to issue a necessary permit or other required approval in a timely fashion is an event of Force Majeure provided that ADM can meet its burden of demonstrating that it has taken all steps available to it to obtain the necessary permit or other required approval, including but not limited to:

- (a) submitting a timely and complete application;
- (b) responding to requests for additional information by the permitting authority in a timely fashion; and
- (c) prosecuting appeals of any disputed terms and conditions imposed by the permitting authority in an expeditious fashion.

115. Notwithstanding any other provision of this Consent Decree, this Court shall not draw any inferences nor establish any presumptions adverse to either party as a result of ADM delivering



a notice of Force Majeure or the parties' inability to reach agreement.

116. As part of the resolution of any matter submitted to this Court under this Section XIV, the parties by agreement, or this Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by the Plaintiffs or approved by this Court. ADM shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

#### **XV. DISPUTE RESOLUTION**

117. The dispute resolution procedure provided by this Section XV shall be available to resolve all disputes arising under this Consent Decree, except as otherwise provided in Section XIV regarding Force Majeure.

118. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the parties to the Consent Decree. Notice shall be given, at a minimum, to the United States, the appropriate state or regional air authority(ies) and ADM advising of a dispute pursuant to this Section XV. The notice shall describe the nature of the dispute, and shall state the noticing party's position with regard to such

dispute. The parties receiving such a notice shall acknowledge receipt of the notice and the parties shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

119.[reserved].

120. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the United States, ADM and the appropriate state or regional air authority. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting between representatives of the Plaintiffs and ADM, unless the parties' representatives agree to shorten or extend this period.

121. In the event that the parties are unable to reach agreement during such informal negotiation period, the Plaintiffs shall provide ADM with a written summary of their position regarding the dispute. The position advanced by the Plaintiffs shall be considered binding unless, within forty-five (45) calendar days of ADM's receipt of the written summary of the Plaintiffs' position, ADM files with this Court a petition which describes the nature of the dispute, and includes a statement of ADM's position and any supporting data, analysis, and documentation relied on by ADM. The Plaintiffs shall respond to the petition within forty-five (45) calendar days of filing. ADM

shall comply with the Plaintiffs' final position during the dispute resolution process unless otherwise ordered by the Court. In the event that the United States and the appropriate state or regional air authority are unable to reach agreement with regard to ADM's claim, the position of the United States shall be the Plaintiffs' final position. A dissenting Plaintiff-Intervener may file such other pleadings expressing its position as allowed by the Court.

122. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Section XV may be shortened upon motion of one of the parties to the dispute.

123. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall not draw any inferences nor establish any presumptions adverse to either party as a result of invocation of this Section XV or the parties' inability to reach agreement. The final position of the Plaintiffs shall be upheld by the Court if supported by substantial evidence in the record as identified and agreed to by all the Parties.

124. As part of the resolution of any dispute submitted to dispute resolution, the parties, by agreement, or this Court, by order, may, in appropriate circumstances, extend or modify the schedule for completion of work under this Consent Decree to

account for the delay in the work that occurred as a result of dispute resolution. ADM shall be liable for stipulated penalties for their failure thereafter to complete the work in accordance with the extended or modified schedule.

#### **XVI. GENERAL PROVISIONS**

##### 125. Effect of Settlement.

(a). This Consent Decree is not a permit; compliance with its terms does not guarantee compliance with any applicable federal, state or local laws or regulations.

(b). In determining whether a future modification will result in a significant net emissions increase, ADM shall not take credit for any emissions reductions required by the CTPs, as set forth in Attachment 12, for netting purposes as defined by the applicable regulations implementing Part C of Title I of the Clean Air Act. In addition, the emission reductions of PM, PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO and VOC (at units other than dryers) required under this Consent Decree, as set forth in Attachment 12, may not be used for any emissions offset, banking, selling or trading program. ADM may not use VOC emission reductions up to 98% of the uncontrolled dryer emissions for any emissions offset, banking, selling or trading program. ADM may not use NO<sub>x</sub> emission reductions up to 70% of the uncontrolled boiler emissions from Clinton Boilers #6 and #7 for emission netting purposes.

126. Resolution of Claims. Satisfaction of all of the requirements of this Consent Decree constitutes full settlement of and shall resolve all past civil and administrative liability of ADM to the Plaintiffs for the violations alleged in the Plaintiffs' Complaints and all civil and administrative liability of ADM for any violations at its plants listed herein based on facts and events that occurred during the relevant time period under the following statutory and regulatory provisions:

(a) New Source Performance Standards. NSPS, 40 C.F.R. Part 60, including Subparts Db, Dc, DD, Kb, VV, and Y;

(b) Prevention of Significant Deterioration. PSD requirements at Part C of the Act and the regulations promulgated thereunder at 40 C.F.R. § 52.21, and the SIP provisions which incorporate and implement the above-listed federal statutes and regulations;

(c) State Implementation Plan Requirements. SIP requirements for permitting of the construction and operation of new and modified stationary sources, requirements relating to VOC and/or CO emission limits in permits issued for such construction and operation, and requirements for payment of fees based on quantity of emissions;

(d) Toxic Chemical Release Reporting. Requirements to file appropriate VOC-related reports that can be satisfied using the Toxics Release Inventory form (Form R) pursuant to EPCRA §313, 42

U.S.C. § 11023, for the relevant time period, for the plants listed in Paragraphs 7 through 14, upon ADM's corrective filing of a complete report for each instance of toxic chemical release of the identified chemicals, by no later than 12 months from the date of lodging of this Consent Decree; and

(e) Civil Penalties for violations of Nebraska Air Quality Regulations, Title 129, Chapter 27, relating to hazardous air pollutants.

Relevant Time Period. For purposes of this Consent Decree, the "relevant time period" shall mean the period beginning when the Plaintiffs' claims under the above statutes and regulations accrued through the date of lodging of this Consent Decree. During the effective period of the Consent Decree, all emission units at the plants covered by this Decree shall be on a compliance schedule and any modification to units within these plants, as defined in 40 C.F.R. § 52.21, which is not required by this Consent Decree is beyond the scope of this resolution of claims.

127. Reservation of Specific Claims. The release of liability granted by this Consent Decree under Paragraph 126 specifically excludes the following claims, and Plaintiffs expressly reserve their rights to proceed with:

(a). Pending claims in the State of Illinois regarding alleged violations at the Decatur, Illinois facility which are addressed by Illinois administrative case number PCB 95-180;

(b). Pending claims in the State of Illinois regarding alleged violations at the Peoria, Illinois facility which are addressed by Illinois administrative case number PCB 97-33;

(c). Pending claims based on self-disclosed violations of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq. ("CERCLA") and Emergency Planning and Community Right To Know Act ("EPCRA"), 42 U.S.C. § 11023, at facilities in Illinois, Minnesota, Iowa, Nebraska, and North Dakota.<sup>2</sup>

(d). NSPS, 40 C.F.R. Part 60, for those units that fit the categories of Subparts Db, Dc, Kb, Y, DD or VV, but for which ADM does not accept applicability for the unit under NSPS, as set forth in Paragraph 42.

(e). Injunctive relief to require compliance with Nebraska Air Quality Regulations, Title 129, Chapter 27, relating to hazardous air pollutants, and reservation of rights pursuant to 40 C.F.R. § 52.21(c) and/or the equivalent provision of the Nebraska SIP with respect to the Columbus, Nebraska facility.

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<sup>2</sup> Southport, NC; Decatur, Peoria, Quincy, and Taylorville, IL; Mankato, MN; Clinton, Cedar Rapids, and Des Moines, IA; Lincoln, NE; Walhalla and Velva, ND.

128. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve ADM of its obligation to comply with all applicable federal, state and local laws and regulations. Nothing in this Consent Decree shall be construed to prevent or limit the Plaintiffs' rights to obtain penalties or injunctive relief under the Act or other federal, state or local statutes or regulations, including but not limited to, Section 303 of the Act, 42 U.S.C. § 7603.

129. Third Parties. Except as otherwise provided by law, this Consent Decree does not limit, enlarge or affect the rights of any party to this Consent Decree as against any third parties. Nothing in this Consent Decree should be construed to create any rights, or grant any cause of action, to any person not a party to this Consent Decree.

130. Costs. Each party to this Consent Decree shall bear its own costs and attorneys' fees through the date of entry of this Consent Decree.

131. Public Documents. All information and documents submitted by ADM to the Plaintiffs pursuant to this Consent Decree shall be subject to public inspection, unless subject to legal privileges or protection or identified and supported confidential business information by the ADM in accordance with 40 C.F.R. Part 2 and applicable state law.



132. A. Public Comments - Federal Approval. The parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the requirements of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and consideration of any comments. The United States reserves the right to withdraw or withhold consent if the comments regarding this Consent Decree discloses facts or considerations which indicate that this Consent Decree is inappropriate, improper or inadequate. ADM and the Plaintiff-Interveners consent to the entry of this Consent Decree.

B. Public Comments - Texas Approval. Final consent to entry of this Consent Decree by the State of Texas is subject to the requirements of Chapter 7, Section 7.110 of the Texas Water Code, which provides for notice of this Consent Decree in the Texas Register, an opportunity for public comment, and consideration of any comments. The State of Texas reserves the right to withdraw or withhold consent if the comments regarding this Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper or inadequate.

133. Notice. Unless otherwise provided herein, notifications to or communications with the Plaintiffs or ADM shall be deemed submitted on the date they are postmarked and sent

either by overnight receipt mail service or by certified or registered mail, return receipt requested. Except as otherwise provided herein, written notification to or communication with the Plaintiffs or ADM shall be in accordance with Attachment 1 to this Consent Decree (Notice and Penalty Payment Provisions).

134. Change of Notice Recipient. Any party may change either the notice recipient or the address for providing notices to it by serving all other parties with a notice setting forth such new notice recipient or address.

135. Modification. There shall be no modification of this Consent Decree without written agreement of the United States, the appropriate Plaintiff and ADM. There shall be no material modification of this Consent Decree without the written agreement of the appropriate Plaintiffs and ADM and by Order of the Court.

136. Continuing Jurisdiction. The Court retains jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree and to take any action necessary or appropriate for its interpretation, construction, execution, or modification. During the term of this Consent Decree, any party may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

XVII. TERMINATION

137. This Consent Decree shall be subject to termination upon motion by any party after ADM satisfies all requirements of this Consent Decree and has implemented the emission reduction projects identified in the CTPs in compliance with all applicable emission limits for a period of 24 months. At such time, if ADM believes that it is in compliance with the requirements of this Consent Decree, and has paid the civil penalty and any stipulated penalties required by this Consent Decree, then ADM shall so certify to the Plaintiffs, and unless the Plaintiffs object in writing with specific reasons within forty-five (45) days of receipt of the certification, the Court shall order that this Consent Decree be terminated on ADM's motion. If the Plaintiffs object to ADM's certification, then the matter shall be submitted to the Court for resolution under Section XV ("Dispute Resolution") of this Consent Decree. In such case, ADM shall bear the burden of proving that this Consent Decree should be terminated.

So entered in accordance with the foregoing this \_\_\_\_\_ day of \_\_\_\_\_, 2003.

---

United States District Court Judge  
Central District of Illinois

FOR PLAINTIFF, UNITED STATES OF AMERICA:

\_\_\_\_\_

Date: \_\_\_\_\_

THOMAS L. SANSONETTI  
Assistant Attorney General  
Environment and Natural Resources Division  
U.S. Department of Justice  
10th & Pennsylvania Avenue, N.W.  
Washington, DC 20530

\_\_\_\_\_

Date: \_\_\_\_\_

DIANNE M. SHAWLEY  
Senior Counsel  
Environment and Natural Resources Division  
U.S. Department of Justice  
1425 New York Avenue, N.W.  
Washington, DC 20005

\_\_\_\_\_

Date: \_\_\_\_\_

KIMBERLY BLEILER  
Trial Attorney  
Environment and Natural Resources Division  
U.S. Department of Justice  
1425 New York Avenue, N.W.  
Washington, DC 20005

JAN PAUL MILLER  
United States Attorney  
Central District of Illinois

\_\_\_\_\_ Date: \_\_\_\_\_

DAVID HOFF  
Assistant United States Attorney  
Central District of Illinois  
600 East Monroe Street  
Springfield, IL 62705  
(217) 492-4450

OF COUNSEL FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

WILLIAM REPSHER  
Attorney-Advisor  
U.S. EPA  
Office of Regulatory Enforcement  
(2248A)  
1200 Pennsylvania Ave, N.W.  
Washington, DC 20460

THOMAS MARTIN  
Associate Regional Counsel  
U.S. Environmental Protection Agency,  
Region 5  
77 West Jackson Blvd  
Chicago, Illinois 60604-3590

BELINDA HOLMES  
Senior Assistant Regional Counsel  
US EPA Region 7  
901 N. 5th Street  
Kansas City, Kansas 66101

JIM EPPERS  
Senior Enforcement Attorney  
Legal Enforcement Program (8ENF-L)  
US EPA Region 8  
999 18th Street, Suite 300  
Denver, CO 80202-2466

**ATTACHMENT 1**  
**NOTICE AND PENALTY PAYMENT PROVISIONS**

**The United States**

**Payment of penalties:**

Payment shall be made in accordance with paragraph 82 of the Consent Decree.

**Contact persons for notices:**

Information shall be sent to the appropriate Plaintiffs in accordance with the Consent Decree at the addresses below.

**Region IV**

Todd Russo 4APT-AEEB  
U.S. EPA Region IV  
61 Forsyth Street  
Atlanta, GA 30303

phone: (404) 562-9194  
fax: (404) 562-9164  
e-mail: Russo.Todd@EPA.GOV

**Region V**

Shaun Burke  
U.S. EPA Region V  
77 W Jackson Blvd  
Mail Code: AE-17J  
Chicago, IL 60604

phone: (312) 353-5713  
fax: (312) 353-8289  
e-mail: Burke.Shaun@EPA.GOV

Thomas J. Martin  
U.S. EPA Region V  
77 W. Jackson Blvd.  
Mail Code: C-14J

Chicago, IL 60604

phone: (312) 886-4273  
fax: (312) 886-7160  
e-mail: [Martin.Thomas@EPA.GOV](mailto:Martin.Thomas@EPA.GOV)

Region VI

Agatha Benjamin 6EN-HT  
Hazardous Waste Enforcement Branch  
Compliance Assurance and Enforcement Division  
U.S. EPA Region VI  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

phone: (214) 665-7292  
fax: (214) 655-7264  
e-mail: [Benjamin.Agatha@EPA.GOV](mailto:Benjamin.Agatha@EPA.GOV)

Ben Harrison (6RC-EA)  
Team Leader  
Air & Toxic Branch  
U.S. EPA Region VI  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

phone: (214) 665-2139  
fax: (214) 665-3177  
e-mail: [Harrison.Ben@EPA.GOV](mailto:Harrison.Ben@EPA.GOV)

Region VII

Bill Peterson  
U.S. EPA Region VII ARTD  
901 N. 5<sup>th</sup> Street  
Kansas City, KS 66101

phone: (913) 551-7881  
fax: (913) 551-7844  
e-mail: [Peterson.Bill@EPA.GOV](mailto:Peterson.Bill@EPA.GOV)

Region VIII

Scott Whitmore



Environmental Protection Specialist  
Mail code (ENF-T)  
U.S. EPA Region VIII  
999 18th Street, Suite 300,  
Denver, CO 80202-2466

phone: (303) 312-6317  
fax: (303) 312-6409  
e-mail: Whitmore.Scott@EPA.GOV

Jim Eppers  
Senior Attorney  
Mail Code (ENF-L)  
U.S. EPA Region VIII  
999 18th Street, Suite 300,  
Denver, CO 80202-2466

phone: (303) 312-6893  
fax: (303) 312-6953  
e-mail: Eppers.Jim@EPA.GOV

**State of Arkansas**

**Payment of penalties:**

Check must be made to the order of “Fiscal Division” and mailed to:

Fiscal Division  
Arkansas Department of Environmental Quality  
PO Box 8913  
Little Rock, AR 72219

**Contact persons for notices:**

Charlie Moulton  
Office of the Attorney General  
323 Center Street, Suite 200  
Little Rock, AR 72201

phone: (501) 682 2007  
1-800-482-8982  
fax: (501) 682-8118  
e-mail: oag@ag.state.ar.us

Ellen Rouch  
ADEQ Legal Division  
Street Address: 8001 National Drive  
Little Rock, AR 72209  
Mailing Address: P.O. Box 8913  
Little Rock, AR 72219-8913

phone: (501) 682-0885  
fax: (501) 682-0891  
e-mail: rouch@adeq.state.ar.us

David Stowers  
ADEQ Air Division  
Street Address: 8001 National Drive  
Little Rock, AR 72209  
Mailing Address: P.O. Box 8913  
Little Rock, AR 72219-8913

phone: (501) 682-0795  
fax: (501) 682-0891  
e-mail: stowers@adeq.state.ar.us

### **State of Illinois**

#### **Payment of penalties:**

Payment of the civil penalty of \$371,500:

The check shall be made payable to the Illinois EPA for deposit into the Illinois Environmental Protection Trust Fund and delivered to:

Illinois Environmental Protection Agency  
Fiscal Services  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

Payment for the Illinois Supplemental Environmental Projects shall be made as follows:

\$50,000 to:  
Midwest Environmental Enforcement Association  
525 South Tyler Road, Suite N-1B  
St. Charles, IL 60174

\$1,000,000 to:

Illinois Attorney General's State Projects and Court Ordered Distribution Fund  
500 South Second Street  
Springfield, IL 62706

\$2,550,000 total to:

Illinois Environmental Protection Agency  
State Special Projects Fund (\$250,000 for watershed management and \$2,300,000 for  
“Green School Bus Program”)  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

\$1,000,000 to:

Illinois Conservation Foundation  
c/o Illinois Department of Natural Resources  
One Natural Resources Way  
Springfield, IL 62702-1271

**Contact persons for notices:**

Ms. Julie K. Armitage  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance and Enforcement Section  
1021 North Grand Avenue East, P.O.  
Box 19276  
Springfield, IL 62794-9276

phone: (217) 782-5811  
fax: (217) 782-6348  
e-mail: Julie.Armitage@epa.state.il.us

Thomas Davis  
Illinois Attorney General's Office  
Environmental Bureau  
500 South Second Street  
Springfield, IL 62706

phone: (217)782-7968  
fax: (217)524-7740  
e-mail: tdavis@atg.state.il.us

**State of Indiana**

**Payment of penalties:**

Check must be made payable to the “Environmental Management Special Fund.” The check must include the case number of this action and shall be mailed to:

Cashier  
Indiana Department of Environmental Management  
100 N. Senate Avenue  
P.O. Box 7060  
Indianapolis, IN 46207-7060

NOTE: The IDEM case number assigned to this case is 2003-12701-A. Please use this case number so that the Cashier will post the check to the appropriate account code.

**Contact person for notices:**

Matthew Stuckey  
Senior Environmental Manager  
Office of Enforcement - Air Section  
Indiana Department of Environmental Management  
100 N. Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 42606-6015

phone: (317) 233-1134  
fax: (317) 233-5968  
e-mail: mstuckey@dem.state.In.us

**State of Iowa**

**Payment of penalties:**

The check must be made to the order of “The State of Iowa” and mailed to:

David R. Sheridan  
Assistant Attorney General  
Environmental Law Division  
Lucas State Office Building  
321 E. 12th Street, Room 018  
Des Moines, IA 50319

**Contact person for notices:**

Chuck Corell, Supervisor

Inventory, Compliance & Monitoring  
Air Quality Bureau, Iowa DNR  
7900 Hickman Rd., Suite 1  
Urbandale, IA 50322

phone: (515) 281-8448  
fax: (515) 242-5094  
e-mail: Chuck.Corell@DNR.state.ia.us

**Linn County, Iowa**

**Payment of penalties:**

Checks must be made to the order of “Linn County Air Quality Division c/o the Linn County Treasurer,” and must be mailed to:

Linn County Public Health Department  
501 13th St. NW.  
Cedar Rapids, IA 52405

**Contact person for notices:**

Gregory D. Slager  
Air Pollution Control Officer  
Linn County Public Health Department  
501 13th St. NW.  
Cedar Rapids, IA 52405

phone: (319) 892-6010  
fax: (319) 892-6099  
e-mail: Gregs@air.linn.ia.us

**Polk County, Iowa**

**Payment of penalties:**

Check must be made to the order of the “Polk County Treasurer” and mailed to:

Polk County Treasurer  
Polk County Air Quality Division  
5885 NE 14<sup>th</sup> Street  
Des Moines, IA 50313

**Contact person for notices:**

Gary Young, Air Quality Engineer  
Polk County Air Quality Division  
5885 NE 14<sup>th</sup> Street  
Des Moines, IA 50313

phone: (515) 286-3372  
fax: (515) 875-5599  
e-mail: gyoung@co.polk.ia.us

**State of Kansas**

**Payment of penalties:**

Check must be made to the order of “KDHE BAR Permitting and Compliance Unit” and sent to D. J. Law at the address below.

**Contact person for notices:**

D. J. Law  
Kansas Department of Health and Environment  
Bureau of Air and Radiation  
1000 SW Jackson, Suite 310  
Topeka, KS 66612-1366

phone: (785) 296-1542  
fax: (785) 296-1545  
email: dlaw@kdhe.state.ks.us

**State of Minnesota**

**Payment of penalties:**

The check must be made to the order of “Minnesota Pollution Control Agency” and mailed to:

Enforcement Penalty Coordinator  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155-4194

**Contact person for notices:**

Scott Parr

Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155

phone: (651) 296-7636  
fax: (651) 296-8717  
e-mail: scott.parr@pca.state.mn.us

**State of Missouri:**

**Payment of penalties:**

The penalties payable to Missouri must be made by two checks, in equal amounts. One check must be made payable to the “Treasurer of Audrain County, Missouri” as custodian of the Audrain County School Fund. The other should be payable to the “Treasurer of Jackson County, Missouri” as custodian of the Jackson County School Fund.

Both checks should be mailed to the attention of :

Timothy P. Duggan  
Assistant Attorney General  
P.O. Box 899  
Jefferson City, MO 65102-0899

phone: (573) 751-9802  
fax: (573) 751-8464  
e-mail: tim.duggan@mail.ago.state.mo.us

**Contact person for notices:**

Steve Feeler  
Air Pollution Control Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

phone: (573)751-4817  
fax: (573) 751-2706  
e-mail: nrfeels@mail.dnr.state.mo.us

**State of Nebraska**

**Payment of penalties:**

Penalties payable to Nebraska must be made out in two separate checks:

One payable to the “Clerk of the District Court of Platte County, Nebraska,” in the amount of \$111,000.00; and one payable to the “Treasurer of Dodge County, Nebraska,” in the amount of \$61,000.00.

Note: The Platte County check is payable to the Court instead of the County Treasurer in order to facilitate release of the pending civil penalty case in Columbus.

Mail both checks to:

William L. Howland  
Assistant Attorney General  
2115 State Capitol Building  
Lincoln, NE 68509

**Contact person for notices:**

Timothy J. Doyle  
Nebraska Dept. of Environmental Quality  
Suite 400, The Atrium  
1200 "N" Street  
P.O. Box 98922  
Lincoln, NE 68509-8922

phone: (402) 471-4603  
fax: (402) 471-2909  
e-mail: Tim.Doyle@ndeq.state.ne.us

**Lincoln/Lancaster County, Nebraska**

Payment of penalties:

The check must be made payable to the Lincoln- Lancaster County Health Department (Air Pollution Control Fund) and mailed to the Department at:

3140 N Street  
Lincoln, NE 68510

**Contact person for notices:**

Rick Thorson  
Assistant Chief, Environmental Public Health  
Lincoln-Lancaster County Health Department



3140 N Street  
Lincoln, NE 68510

phone: (402) 441-6236  
fax: (402) 441-3890  
e-mail: rthorson@ci.lincoln.ne.us

**State of North Dakota**

**Payment of penalties:**

The check must be made payable to “North Dakota Department of Health” and mailed to:

Dave D. Glatt, Chief  
Environmental Health Section  
North Dakota Department of Health  
P.O. Box 5520  
Bismarck, ND 58506-5520

**Contact person for notices:**

Gary L. Kline  
Division of Air Quality  
North Dakota Department of Health  
P.O. Box 5520  
Bismarck, ND 58506-5520

phone: (701) 328-5188  
fax: (701) 328-5200  
email: gkline@state.nd.us

**State of South Carolina**

**Payment of penalties:**

The check must be made payable to South Carolina Department of Health and Environmental Control and mailed to Keith Frost at the address below.

**Contact person for notices:**

Keith Frost  
Manager, Air Enforcement Section  
SCDHEC  
Bureau of Air Quality

2600 Bull Street  
Columbia, SC 29201

phone: (803) 898-4115  
fax: (803) 898-4117  
e-mail: frostrk@dhec.sc.gov

**State of Texas**

**Payment of penalties:**

The check shall be made payable to “The State of Texas” and mailed to:

Chief, Natural Resources Division, (Attn: Karen Kornell)  
Office of the Attorney General  
P.O. Box 12548  
Austin, TX 78711-2548

The check shall bear the notation “Settlement of U.S. v. ADM,” with the court and docket number.

**Contact person for notices:**

J. Stephen Carow, Esq.  
Office of the Texas Attorney General  
Mailing address: P.O. Box 12548  
Austin, TX 78711-2548

Street address: 300 W. 15 Street  
10<sup>th</sup> floor  
Austin, TX 78701

phone: (512) 475-4015  
fax: (512) 320-0052  
e-mail: Steve.Carow@OAG.state.tx.us

## Attachment 2

# **Control Technology Plan For Cedar Rapids, IA Wet Corn Mill**

March 14, 2003

## **TABLE OF CONTENTS**

**1.0 Introduction**

**2.0 Process Flow Diagram**

**3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment**

**4.0 Engineering Design Criteria for Pollution Control Equipment**

**5.0 Monitoring Parameters for Pollution Control Equipment**

**6.0 Continuous Emission Monitors**

**7.0 Emission Limits**

**8.0 Schedules for Emission Reduction Projects**

**9.0 Pollution Control Equipment Performance Test Schedule and Test Methods**

**10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

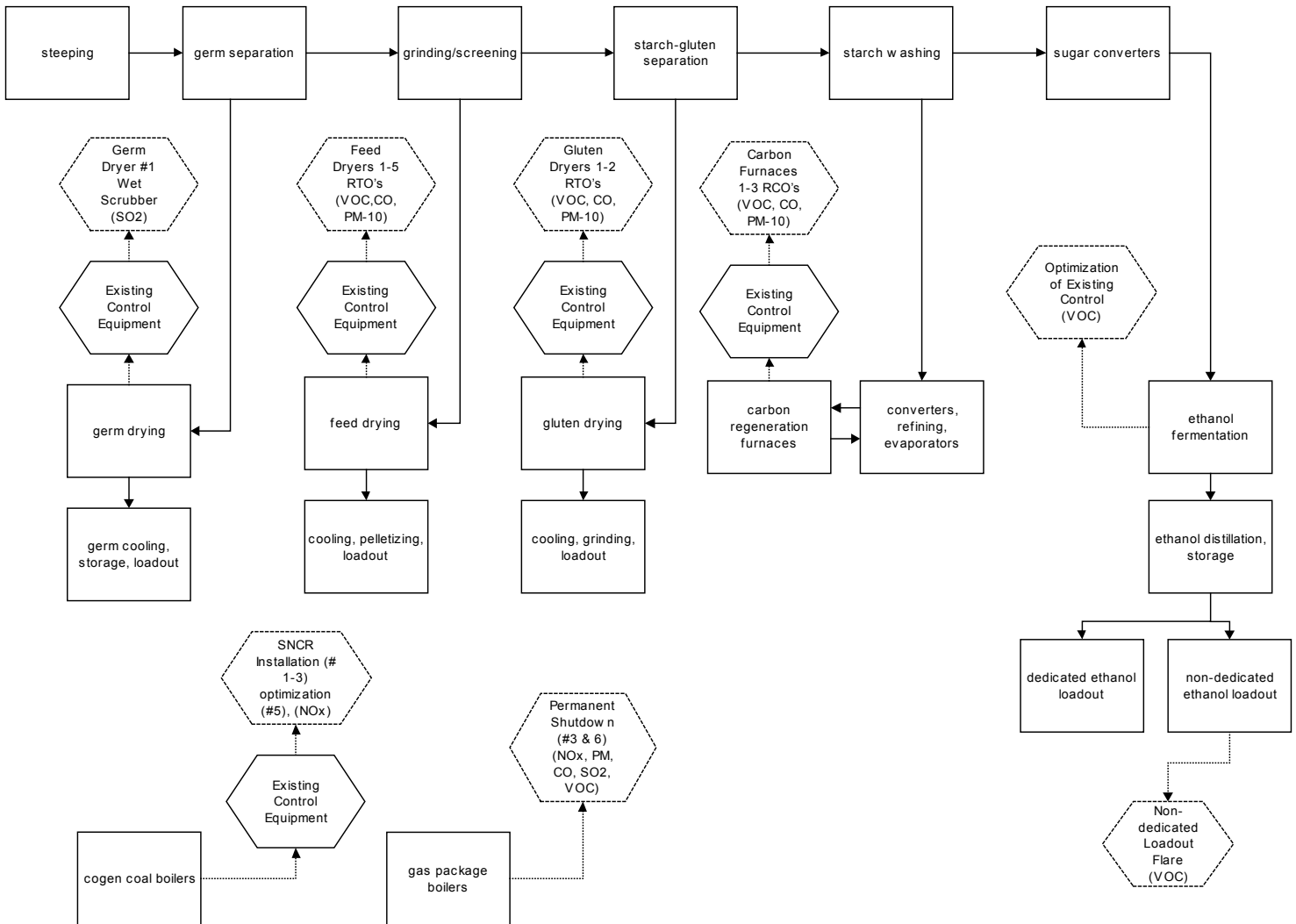
## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicated control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-501a	Cogen Boiler No. 1 (551.5 MMBtu/Hr)	CE-501c	SNCR (NOx)
EU-501b	Cogen Boiler No. 2 (551.5 MMBtu/Hr)	CE-501d	SNCR (NOx)
EU-502a	Cogen Boiler No. 3 (551.5 MMBtu/Hr)	CE-502c	SNCR (NOx)
EU-530	Cogen Boiler No. 5 (1500 MMBtu/Hr)	CE-530a	Optimization of SNCR (NOx)
EU-19	Gluten Feed Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
EU-30	Gluten Feed Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)
EU-43	Gluten Feed Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)
EU-G54	Gluten Feed Dryer No. 4	CE-XX	RTO (VOC, CO, PM/PM10)
EU-G55	Gluten Feed Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)
EU-11	Gluten Meal Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
EU-18	Gluten Meal Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)
EU-15	Fluid Bed Germ Dryer No. 1	CE-15	Scrubber (SO2)
EU-24	Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)
EU-27	Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)
EU-17	Carbon Furnace No. 3	CE-XX	RCO (VOC, CO, PM/PM10)
EU-55	Ethanol Fermenters	CE-55	Optimization of Scrubber (VOC)
EU-76	Non-dedicated Ethanol Loadout	CE-76	Flare (VOC)
EU-14	Package Boiler No. 3	None	Permanent Shutdown (NOx)
EU-41	Package Boiler No. 6	None	Permanent Shutdown (NOx)

#### Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

#### Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and Iowa DNR, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:

$$X \leq Y * (1-Z)$$



Where: X = lbs/hr emission rate post changes  
Y = lbs/hr emission rate pre changes  
Z = Control efficiency required by consent decree

- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to USEPA and Iowa DNR for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.

#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

Emission Unit Description	Control Equipment #	Control Equipment/Optimization Description	Design Criteria Targets
Cogen Boiler No. 1-3	CE-501c CE-501d CE-502c	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 5	CE-530a	Optimization of SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5%
Gluten Feed Dryer No. 1-5	CE-XX CE-XX CE-XX CE-XX CE-XX	RTO (VOC, CO, PM, PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
Gluten Meal Dryer No. 1-2	CE-XX CE-XX	RTO (VOC, CO, PM, PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
Fluid Bed Germ Dryer No. 1	CE-15	Scrubber (SO2)	Gas Flow Rate = To be determined (TBD*) Pressure Drop = TBD* Scrubbing Liquor Flow Rate = TBD* Scrubbing Liquor pH = TBD*
Carbon Furnace No. 1-3	CE-XX CE-XX CE-XX	RCO (VOC, CO, PM, PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
Ethanol Fermenters	CE-55	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ 30,000 scfm Pressure Drop => 5 in of water column Scrubbing Liquor Flow Rate ≥ 125 gpm
Non-dedicated Ethanol Loadout	CE-76	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*
Package Boiler No. 3	N/A	Permanent Shutdown (NOx)	N/A
Package Boiler No. 6	N/A	Permanent Shutdown (NOx)	N/A

\* Value to be determined once detailed engineering has been completed for the control equipment.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Gluten Feed Dryer No. 1-5	CE-XX CE-XX CE-XX CE-XX CE-XX	RTO (VOC, CO, PM, PM10)	Operating Temperature	>= TBD*	Continuously
Gluten Meal Dryer No. 1-2	CE-XX CE-XX	RTO (VOC, CO, PM, PM10)	Operating Temperature	>= TBD*	Continuously
Fluid Bed Germ Dryer No. 1	CE-15	Scrubber (SO <sub>2</sub> )	Scrubbant Flow Rate	>= TBD*	Once each day
			Scrubbant pH	>= TBD*	Once each day
			Pressure Drop	>= TBD*	Once each day
Carbon Furnace No. 1-3	CE-XX CE-XX CE-XX	RCO (VOC, CO, PM, PM10)	Operating Temperature	>= TBD*	Continuously
Ethanol Fermenters	CE-55	Scrubber (VOC)	Scrubbant Flow Rate	>= 125 gpm*	Once each day
			Pressure Drop	>= 5 inches of water column*	Once each day
Non-dedicated Ethanol Loadout	CE-76	Flare (VOC)	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

### 6.0 Continuous Emission Monitors

The control equipment listed below shall be equipped with Continuous Emissions Monitors (CEMs). All monitoring data shall be collected, recorded and maintained on-site in accordance with the requirements of 40 CFR Part 60. Any deviation of emission limits shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Parameter Monitored
Cogen Boiler No. 1-3, 5	NO <sub>x</sub>
	SO <sub>2</sub>
	O <sub>2</sub>

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to the schedule in Paragraph 18 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual report and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment/Optimization Description	Pollutant	Emission Limit(s)
Cogen Boiler No. 1-3	CE-501c CE-501d CE-502c	SNCR	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	n/a	Circulating Fluidized Bed Combustion (CFBC) Process	SO2	90% reduction (30-day rolling) 0.45 lb/MMBtu (30-day rolling) or 0.20 lb/MMBtu if coal SO2 is <2.0 lb/MMBtu
Cogen Boiler No. 4	n/a	CFBC Process	SO2	90% reduction (30-day rolling) 0.45 lb/MMBtu (30-day rolling) 0.94 lb/MMBtu (3-hr test)
Cogen Boiler No. 5	CE-530a	Optimization of SNCR	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	n/a	CFBC Process	SO2	92% reduction (30-day rolling) 0.36 lb/MMBtu (30-day rolling)
Gluten Feed Dryer No. 1-5	CE-XX CE-XX CE-XX CE-XX CE-XX	RTO <sup>(5)(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
Gluten Meal Dryer No. 1-2	CE-XX CE-XX	RTO <sup>(2)(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
Fluid Bed Germ Dryer	CE-15	Scrubber <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Carbon Furnace No. 1-3	CE-XX CE-XX CE-XX	RCO <sup>(3)(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
Ethanol Fermenters	CE-55	Scrubber <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Non-dedicated Ethanol Loadout	CE-76	Flare <sup>(1)</sup>	VOC	95% control
Package Boiler No. 3 & 6	N/A	Permanent Shutdown	NOx	N/A

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown

periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

(2) Will follow the protocol in Section 10.0 of this CTP

(3) A cold startup period is defined as that period of time when a coal-fired cogen boiler is proceeding to increase the temperature in the lower combustor from less than 400F to at least 1500F. This period shall last no more than 48 hours and NOx emissions data from this period shall be excluded when determining compliance with the optimized limits established pursuant to this section of the CTP. Ammonia injection shall begin as soon as the lower combustor temperature reaches 1500F and the cold startup period will end at this time. All data from cold startup periods after the first 48 hours, or while ammonia is injected in the boiler, will be included in determining compliance with the optimized limit.

## 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
Ethanol Fermenters	Scrubber (VOC)

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting down equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects will be installed based on the following schedule.

Emission Unit Description	Emission Reduction Project	Installation Deadline
Fluid Bed Germ Dryer No. 1	Scrubber (SO <sub>2</sub> )	April 30, 2004
Package Boiler No. 3	Shutdown	April 30, 2006
Package Boiler No. 6	Shutdown	April 30, 2007

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Cogen Boiler No. 1-3/ SNCR	NOx	CEMs Part 60 Relative Accuracy Test Assessment (RATA)
	SO <sub>2</sub>	CEMs Part 60 RATA
Cogen Boiler No. 5/ SNCR	NOx	CEMs Part 60 RATA
	SO <sub>2</sub>	CEMs Part 60 RATA
Gluten Feed Dryer No. 1-5/ RTO	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM <sub>10</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Meal Dryer No. 1-2/ RTO	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM <sub>10</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Fluid Bed Germ Dryer/ Scrubber	SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	1, 2, 3A or B, 4, and 6 or 6C.
Carbon Furnace No. 1-3/ (RCO)	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM <sub>10</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup> ,	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare
	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.

2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 and/or NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment.

3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).



## **10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

### SNCR Optimization Study

ADM has agreed to install and/or optimize SNCR systems on four of its circulating fluidized bed cogeneration boilers at Cedar Rapids.

#### **Cogen Boilers 1, 2, and 3**

Prior to the optimization study, ADM shall submit a study plan to USEPA and Iowa DNR for approval. The plan shall address the procedures and schedule for both the optimization and demonstration phases of the study. This plan must be submitted at least 30 days prior to beginning any optimization study. In lieu of submitting a study plan and conducting a study, ADM may submit documentation showing that a boiler is equivalent in design, size and operation to a unit for which an optimization study has all ready been completed and approved, and request that the results of the earlier study be applied to the equivalent unit(s). Such request shall be deemed approved if both USEPA and Iowa DNR fail to deny the request within 30-days of submission.

The optimization studies must be initiated within 180 days of initial startup of the SNCR systems, and SNCR system installation must be completed on a schedule that meets the requirements outlined in Paragraph 30 of the Consent Decree. The optimization studies have a presumptive duration of 12 months, but this duration can be extended by approval of USEPA and Iowa DNR.

Following completion of the optimization studies, ADM shall submit proposed final emission limits in accordance with the requirements of Paragraph 36B of the Consent Decree. This submission will propose a 30-day rolling average NOx emissions limit based on the results of the optimization tests.

#### **Cogen Boiler 5**

ADM will complete the optimization study pursuant to the requirements defined in IDNR permit number 98-A-507P.

### PM/PM10 Emissions Limits

ADM has agreed to establish PM/PM10 emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

## Attachment 3

**Control Technology Plan  
For Clinton, IA  
Wet Corn Mill**

March 14, 2003

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**10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

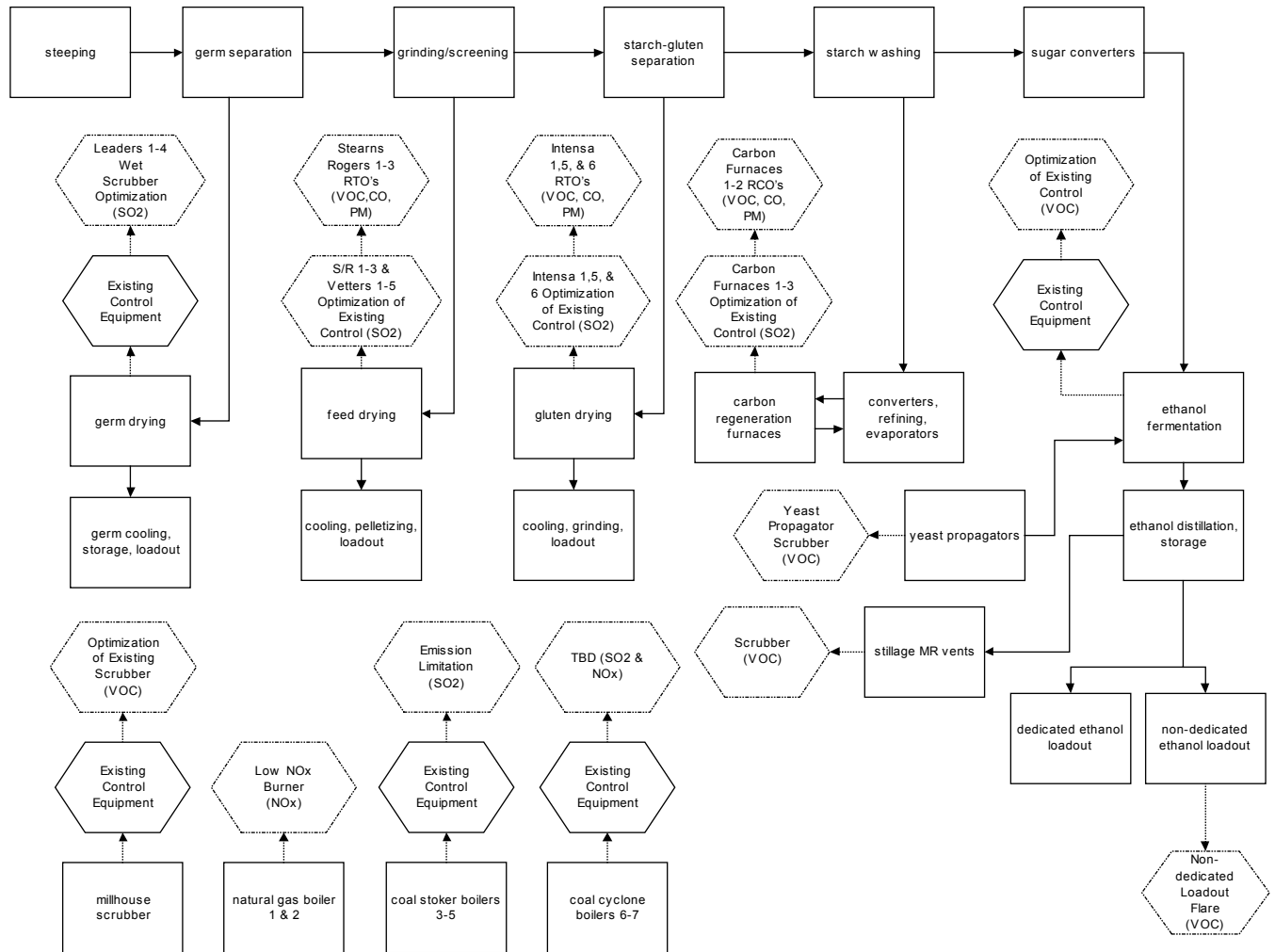
## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-14-65	Stearns Feed Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-25-70	Stearns Feed Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-25-71	Stearns Feed Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-4-40	Gluten Intensa Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-17-61	Gluten Intensa Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-17-62	Gluten Intensa Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-24-6	Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-226-2	Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
EU-73-2	Yeast Propagators	CE-XX	Scrubber (VOC)
EU-73-15, 16, 17, 19, 20 & 58-1	Ethanol Fermenters	CE-58-2	Optimization of Scrubber (VOC)
EU-YRD-2	Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)
EU-78-8, 9, & 10	Stillage MR Vents	CE-XX	Scrubber (VOC)
EU-14-66a-e	Vetter Dryers 1-5	CE-XX	Optimization of Scrubber (SO2)
EU-14-4a-d	Leader Dryers 1-4	CE-XX	Optimization of Scrubber (SO2)
EU-25-72A	Carbon Furnace 3	CE-25-72A	Optimization of Scrubber (SO2)
EU-16a-r	Millhouse Scrubber	CE-7-16	Optimization of Scrubber (VOC)
EU-YRD-1, YRD-4A, & YRD-5A	Stoker Boilers No. 3-5	N/A	Achieve Lowered Emission Limitation (SO2)

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-YRD-6c	Cyclone Boiler No. 6	CE-XX	Achieve Lowered Emission Limitation (SO2)
		CE-XX	SNCR or equivalent reductions <sup>(1)</sup> (NOx)
EU-YRD-7d	Cyclone Boiler No. 7	CE-XX	Achieve Lowered Emission Limitation (SO2)
		CE-XX	SNCR or equivalent reductions <sup>(1)</sup> (NOx)
EU-56-29	Boiler No. 1 - Natural Gas	CE-XX	Low NOx Burner (NOx)
EU-56-30	Boiler No. 2 - Natural Gas	CE-XX	Low NOx Burner (NOx)

(1) ADM may, through demonstration to the USEPA and Iowa DNR, employ alternate methods for reducing NOx emissions provided such methods achieve a level of NOx reduction that is determined to be equivalent to that which could be obtained through application of SNCR to both Boilers 6 & 7. For example, ADM may elect to permanently shut down either boiler 6 or 7, and the NOx reductions resulting from this shutdown are deemed to be equivalent reductions to the SNCR installations on Boilers 6 & 7. If ADM elects to install SNCR, this technology will be first applied to either boiler 6 or 7 as a technology demonstration. If the SNCR demonstration is successful in achieving at least 40% NOx reduction at an optimized ammonia addition rate with a slip of 10 ppm or less, ADM will install SNCR on the remaining unit. If the SNCR demonstration is not successful, ADM is not required to install SNCR on the remaining unit and no further NOx reduction projects are required for Boilers 6 & 7. In this event, ADM shall notify EPA and Iowa DNR whether it will continue to operate the initial SNCR installation, or remove it. ADM shall continue to operate the initial SNCR installation provided the NOx reduction efficiency is equal to or greater than 25% and the operation does not pose operational problems in downstream equipment including plugging and corrosion of economizers, air preheaters, particulate control equipment, or other similar issues, or that the operational costs of the SNCR are not excessive relative to the reductions achieved.

Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to the USEPA and Iowa DNR, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:

$$X \leq Y * (1-Z)$$

Where: X = lbs/hr emission rate post changes  
Y = lbs/hr emission rate pre changes  
Z = Control efficiency required by consent decree

- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to the USEPA and Iowa DNR for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.



#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Stearns Feed Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Stearns Feed Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Stearns Feed Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Intensa Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Intensa Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Intensa Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Yeast Propagators	CE-XX	Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Ethanol Fermenters	CE-58-2	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*
Stillage MR Vents	CE-XX	Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Vetter Dryers 1-5	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Leader Dryers 1-4	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate $\approx$ TBD* scfm pH $\Rightarrow$ TBD* Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Carbon Furnace 3	CE-25-72A	Optimization of Scrubber (SO2)	Gas Flow Rate $\approx$ TBD* scfm pH $\Rightarrow$ TBD* Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Millhouse Scrubber	CE-7-16	Optimization of Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Stoker Boilers No. 3-5	N/A	Achieve Lowered Emission Limitation (SO2)	Heat Input: 143 MMBtu/hour (each)
Cyclone Boiler No. 6	CE-XX	Achieve Lowered Emission Limitation (SO2)	TBD
	CE-XX	TBD (NOx)	TBD
Cyclone Boiler No. 7	CE-XX	Achieve Lowered Emission Limitation (SO2)	TBD
	CE-XX	TBD (NOx)	TBD
Boiler No. 1 - Natural Gas	N/A	Low NOx Burner (NOx)	Heat Input: 142.6 MMBtu/hour Target NOx Emission Rate: 0.06 lbs/MMBtu
Boiler No. 2 - Natural Gas	N/A	Low NOx Burner (NOx)	Heat Input: 142.6 MMBtu/hour Target NOx Emission Rate: 0.06 lbs/MMBtu

\* Value to be determined once detailed engineering has been completed for the control equipment.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Stearns Feed Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Stearns Feed Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Stearns Feed Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Gluten Intensa Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Gluten Intensa Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Gluten Intensa Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Yeast Propagators	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once per day
Ethanol Fermenters	CE-58-2	Optimization of Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once per day
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously
Stillage MR Vents	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once per day
Vetter Dryers 1-5	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day

<b>Emission Unit Description</b>	<b>Control Equipment #</b>	<b>Control Equipment / Optimization Description</b>	<b>Parameter Monitored</b>	<b>Compliance Operating Range/Limit</b>	<b>Monitoring Frequency</b>
Leader Dryers 1-4	CE-XX	Optimization of Scrubber (SO <sub>2</sub> )	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Carbon Furnace 3	CE-25-72A	Optimization of Scrubber (SO <sub>2</sub> )	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once per day
Millhouse Scrubber	CE-7-16	Optimization of Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once per day
Cyclone Boilers 6 & 7	CE-XX	TBD (NO <sub>x</sub> )	TBD**	TBD**	TBD**

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

\*\* To be determined based on selected emission reduction approach.

### 6.0 Continuous Emission Monitors

The control equipment listed below shall be equipped with Continuous Emissions Monitors (CEMs). All monitoring data shall be collected, recorded and maintained on-site in accordance with the requirements of this section. Any deviation of emission limits shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Parameter Monitored
Coal Stoker Boilers No. 3, 4 & 5	SO2
Coal Cyclone Boilers No. 6 & 7	SO2

The SO2 CEMS for all boilers will meet the applicable requirements of 40 CFR Part 60. In addition, the SO2 CEMS for Boilers 6 & 7 will also meet the applicable requirements of 40 CFR Part 75, Subparts B (requirements for a flow monitoring system only) and Subpart D with the following exception: ADM is required to demonstrate that a flow monitor is technically infeasible under 40 CFR Part 75.11(c) or that it is economically impractical before submitting an alternative measurement procedure for approval to USEPA and Iowa DNR. The requirements of 40 CFR Part 75, Subparts A, C, E, F, G, and H do not apply. ADM shall maintain sufficient records and submit sufficient data in the semi-annual reports required by the Consent Decree to demonstrate compliance with the applicable emission limits and as required under other state and federal rules.

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 19 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual report and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Stearns Feed Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Stearns Feed Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Stearns Feed Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Intensa Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Intensa Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Intensa Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm



Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
		(1)	CO	90% control or <= 100 ppm
			PM/PM10	Test and set (2)
	CE-XX	Optimization of Scrubber (SO2) (1)	SO2	90% control or <= 20 ppm
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10) (1)	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set (2)
	CE-XX	Optimization of Scrubber (SO2) (1)	SO2	90% control or <= 20 ppm
Yeast Propagators	CE-XX	Scrubber (VOC) (1)	VOC	95% control or <= 20 ppm
Ethanol Fermenters	CE-58-2	Optimization of Scrubber (VOC) (1)	VOC	95% control or <= 20 ppm
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	VOC	95% control
Stillage MR Vents	CE-XX	Scrubber (VOC) (1)	VOC	<= 20 ppm or Test and set (2)
Vetter Dryers 1-5	CE-XX	Optimization of Scrubber (SO2) (1)	SO2	90% control or <= 20 ppm
Leader Dryers 1-4	CE-XX	Optimization of Scrubber (SO2) (1)	SO2	90% control or <= 20 ppm
Carbon Furnace 3	CE-25-72A	Optimization of Scrubber (SO2) (1)	SO2	90% control or <= 20 ppm
Millhouse Scrubber	CE-7-16	Optimization of Scrubber (VOC) (1)	VOC	95% control or <= 20 ppm
Stoker Boilers No. 3-5	N/A	Achieve Lowered Emission Limitation (SO2)	SO2	SO2 emissions <= 1.2 lb/MMBtu on a 30-day rolling average
Cyclone Boiler No. 6	CE-XX	Achieve Lowered Emission Limitation (SO2)	SO2	Combined SO2 emissions from Boilers 6 & 7 <= 2,934 tons per rolling 12-month period
				Combined SO2 emissions from Boilers 6 & 7 <= 338 tons per rolling 30-day period
	CE-XX	TBD (NOx)	NOx	Emission reductions through application(s) of SNCR or equivalent projects, and establishment of emission limits. See details in Section 3 of this CTP.
Cyclone Boiler No. 7	CE-XX	Achieve Lowered Emission Limitation (SO2)	SO2	Combined SO2 emissions from Boilers 6 & 7 <= 2,934 tons per rolling 12-month period

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
				Combined SO <sub>2</sub> emissions from Boilers 6 & 7 ≤ 338 tons per rolling 30-day period
	CE-XX	TBD (NO <sub>x</sub> )	NO <sub>x</sub>	Emission reductions through application(s) of SNCR or equivalent projects, and establishment of emission limits. See details in Section 3 of this CTP.
Boiler No. 1 - Natural Gas	N/A	Low NO <sub>x</sub> Burner (NO <sub>x</sub> ) <sup>(1)</sup>	NO <sub>x</sub>	Test and set <sup>(2)</sup>
Boiler No. 2 - Natural Gas	N/A	Low NO <sub>x</sub> Burner (NO <sub>x</sub> ) <sup>(1)</sup>	NO <sub>x</sub>	Test and set <sup>(2)</sup>

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Iowa DNR.

(2) Will follow the protocol in Section 10.0 of this CTP.

## 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
N/A	N/A

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment (including in the case of RTO's, whether the unit is designed for on-line bakeout), method of decommissioning for permanently shutting down equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects will be installed based on the following schedule.

Emission Unit Description	Emission Reduction Project	Installation Deadline
Boiler No. 1	Low NOx Burner	December 31, 2007
Boiler No. 2	Low NOx Burner	December 31, 2007
Vetter Dryers 1-5	SO2 Optimization	December 31, 2006
Leader Dryers 1-4	SO2 Optimization	December 31, 2006
Cyclone Boiler 6 & 7	SNCR or equivalent NOx reductions	December 31, 2012

c) The following projects are subject to the compliance demonstration deadline listed.

Emission Unit Description	Emission Limit	Compliance Demonstration Deadline
Coal Stoker Boilers 3, 4, & 5	SO2 emissions <= 1.2 lb/MMBtu on a 30-day rolling average	May 31, 2003
Coal Cyclone Boilers 6 & 7	Combined SO2 emissions <= 338 tons per rolling 30-day period	March 31, 2009
Coal Cyclone Boilers 6 & 7	Combined SO2 emissions <= 2,934 tons per rolling 12-month period	March 31, 2010

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Stearns Feed Dryer No. 1	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Stearns Feed Dryer No. 2	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Stearns Feed Dryer No. 3	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Intensa Dryer No. 1	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Intensa Dryer No. 5	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Intensa Dryer No. 6	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Carbon Furnace No. 1	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Carbon Furnace No. 2	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Yeast Propagators	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare

	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .
Stillage MR Vents	VOC (outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Vetter Dryers 1-4	SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 6 or 6C
Leader Dryers 1-5	SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 6 or 6C
Carbon Furnace 3	SO <sub>2</sub> (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 6 or 6C
Millhouse Scrubber	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Stoker Boilers No. 3-5	SO <sub>2</sub> (outlet)	CEMs Part 60 Relative Accuracy Test Assessment (RATA)
Cyclone Boiler No. 6	SO <sub>2</sub> (outlet)	CEMs Part 60 RATA
	NO <sub>x</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 7E (or approved alternative) if short term limit (i.e., 3 hour average) or CEMs Part 60 RATA if long term limit (ie: 30 day average)
Cyclone Boiler No. 7	SO <sub>2</sub> (outlet)	CEMs Part 60 RATA
	NO <sub>x</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 7E (or approved alternative) if short term limit (i.e., 3 hour average) or CEMs Part 60 RATA if long term limit (ie: 30 day average)
Boiler No. 1 - Natural Gas	NO <sub>x</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 7E
Boiler No. 2 - Natural Gas	NO <sub>x</sub> (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 7E

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.
2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment.
3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).

## **10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

### PM/PM10, NOx & VOC Emissions Limits

ADM has agreed to establish PM/PM10, NOx, & VOC emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

Attachment 4

**Control Technology Plan  
For Decatur, IL  
Wet Corn Mill**

March 14, 2003



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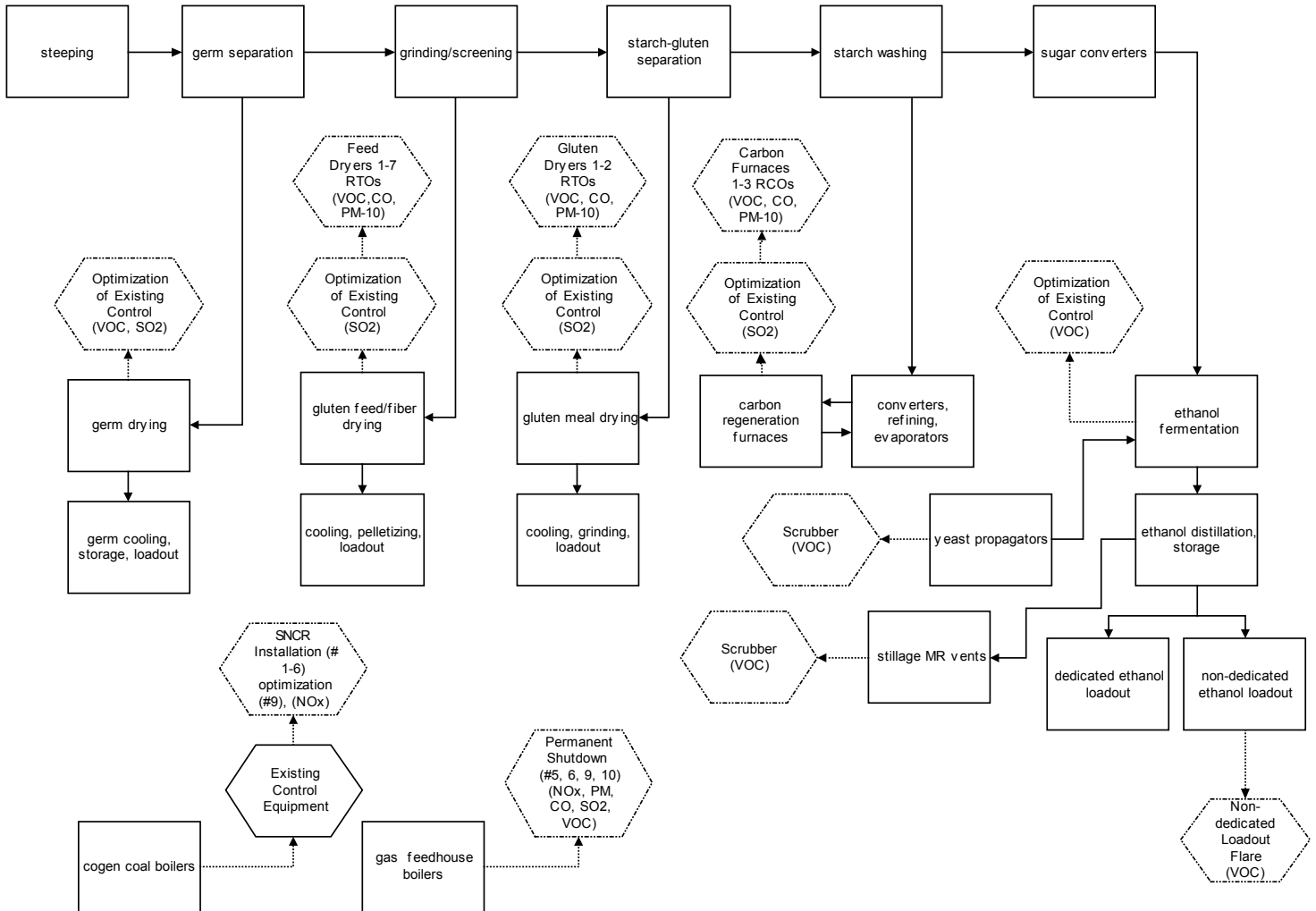
## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
CG10-01	Cogen Boiler No. 1 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-02	Cogen Boiler No. 2 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-03	Cogen Boiler No. 3 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-04	Cogen Boiler No. 4 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-05	Cogen Boiler No. 5 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-06	Cogen Boiler No. 6 (700 MMBtu/Hr)	CE-XX	SNCR (NOx)
CG10-10A	Cogen Boiler No. 9 (1500 MMBtu/Hr)	CE-XX	SNCR Optimization (NOx)
FH10-03I	Gluten Feed Fiber Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03J	Gluten Feed Fiber Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03K	Gluten Feed Fiber Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03L	Gluten Feed Fiber Dryer No. 4	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03G	Gluten Feed Fiber Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03H	Gluten Feed Fiber Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH10-03	Gluten Feed Fiber Dryer No. 7	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH30-02B	Gluten Meal Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH30-02D	Gluten Meal Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
FH20-02	Germ Dryers	CE-XX	Optimization of Scrubber (VOC)

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
		CE-XX	Optimization of Scrubber (SO2)
RF40-01	Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
RF40-02	Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
RF40-03	Carbon Furnace No. 3	CE-XX	RCO (VOC, CO, PM/PM10)
		CE-XX	Optimization of Scrubber (SO2)
AL10-04 to 12	Yeast Propagators	CE-XX	Scrubber (VOC)
AL20-01 to 38	Ethanol Fermenters	CE-XX	Optimization of Scrubber (VOC)
AL60-01Q	Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)
AL30-01A to F	Stillage MR Vents	CE-XX	Scrubber (VOC)
FH40-03	Feedhouse Boiler No. 5	None	Permanent Shutdown (NOx)
FH40-04	Feedhouse Boiler No. 6	None	Permanent Shutdown (NOx)
FH40-07	Feedhouse Boiler No. 9	None	Permanent Shutdown (NOx)
FH40-08	Feedhouse Boiler No. 10	None	Permanent Shutdown (NOx)

Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and Illinois EPA, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:

$$X \leq Y * (1-Z)$$

Where: X = lbs/hr emission rate post changes  
Y = lbs/hr emission rate pre changes  
Z = Control efficiency required by consent decree

- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to USEPA and Illinois EPA for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.

#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Cogen Boiler No. 1	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 2	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 3	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 4	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 5	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 6	CE-XX	SNCR (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5% Maximum design mole ratio of NH3/uncontrolled NOx of at least 3:1
Cogen Boiler No. 9	CE-XX	SNCR Optimization (NOx)	NH3 slip <= 10 ppmvd Opacity <= 5%
Gluten Feed Fiber Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ To Be Determined (TBD)* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Feed Fiber Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
			Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Feed Fiber Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Feed Fiber Dryer No. 4	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Feed Fiber Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Feed Fiber Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Gluten Feed Fiber Dryer No. 7	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Meal Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Gluten Meal Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Germ Dryers	CE-XX	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
	CE-XX	Optimization of Scrubber (SO2)	
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO2)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F



Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
	CE-XX	Optimization of Scrubber (SO <sub>2</sub> )	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Carbon Furnace No. 3	CE-XX	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
	CE-XX	Optimization of Scrubber (SO <sub>2</sub> )	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Yeast Propagators	CE-XX	Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Ethanol Fermenters	CE-XX	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*
Stillage MR Vents	CE-XX	Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm pH => TBD* Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Feedhouse Boiler No. 5	None	Permanent Shutdown (NO <sub>x</sub> )	N/A
Feedhouse Boiler No. 6	None	Permanent Shutdown (NO <sub>x</sub> )	N/A
Feedhouse Boiler No. 9	None	Permanent Shutdown (NO <sub>x</sub> )	N/A
Feedhouse Boiler No. 10	None	Permanent Shutdown (NO <sub>x</sub> )	N/A

\* Value to be determined once detailed engineering has been completed for the control equipment.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Gluten Feed Fiber Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 4	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Feed Fiber Dryer No. 7	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Meal Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Gluten Meal Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Germ Dryers	CE-XX	Optimization of Scrubber (VOC)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
	CE-XX	Optimization of Scrubber (SO2)			
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Carbon Furnace No. 3	CE-XX	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
	CE-XX	Optimization of Scrubber (SO2)	pH Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD* >= TBD*	Once each day
Yeast Propagators	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Ethanol Fermenters	CE-XX	Optimization of Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously
Stillage MR Vents	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

### 6.0 Continuous Emission Monitors

The control equipment listed below shall be equipped with Continuous Emissions Monitors (CEMs). All monitoring data shall be collected, recorded and maintained on-site in accordance with the requirements of 40 CFR Part 60. Any deviation of emission limits shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Parameter Monitored
Cogen Boilers No. 1-6, 9	NOx
	SO2
	O2 or CO2
Cogen Boilers No. 7 & 8	SO2
	O2 or CO2

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 20 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual report and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Cogen Boiler No. 1	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	Circulating Fluidized Bed Combustion (CFBC) Process	SO2	1.2 lbs/MMBtu (30-day rolling)  90% reduction (30-day rolling) unless emissions <0.5 lb/MMBtu then 70%.
Cogen Boiler No. 2	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	CFBC Process	SO2	1.2 lbs/MMBtu (30-day rolling)  90% reduction (30-day rolling) unless emissions <0.5 lb/MMBtu then 70%.
Cogen Boiler No. 3	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	CFBC Process	SO2	1.2 lbs/MMBtu (30-day rolling)  90% reduction (30-day rolling) unless emissions <0.5 lb/MMBtu then 70%.
Cogen Boiler No. 4 (492 MMBtu/Hr)	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	CFBC Process	SO2	1.2 lbs/MMBtu (30-day rolling)  90% reduction (30-day rolling) unless emissions <0.5 lb/MMBtu then 70%.
Cogen Boiler No. 5	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	CFBC Process	SO2	1.2 lbs/MMBtu (30-day rolling)  90% reduction (30-day rolling) unless emissions <0.5 lb/MMBtu then 70%.
Cogen Boiler No. 6	CE-XX	SNCR (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>
	N/A	CFBC Process	SO2	0.7 lbs/MMBTU (30-day rolling)  90% reduction (30-day rolling)
Cogen Boilers No. 7 & 8	N/A	CFBC Process	SO2	0.7 lbs/MMBTU (30-day rolling)  90% reduction (30-day rolling)
Cogen Boiler No. 9	CE-XX	SNCR Optimization (NOx)	NOx	Optimize reductions, test and set (30-day rolling) <sup>(2)(3)</sup>

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
	N/A	CFBC Process	SO2	0.7 lbs/MMBTU (30-day rolling) 92% reduction (30-day rolling)
Gluten Feed Fiber Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 3	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 4	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 5	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 6	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Feed Fiber Dryer No. 7	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Meal Dryer No. 1	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Gluten Meal Dryer No. 2	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Germ Dryers	CE-XX	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% reduction or <= 20 ppm
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Carbon Furnace No. 1	CE-XX	RCO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Carbon Furnace No. 2	CE-XX	RCO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Carbon Furnace No. 3	CE-XX	RCO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% reduction or <= 10 ppm
			CO	90% reduction or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
	CE-XX	Optimization of Scrubber (SO2) <sup>(1)</sup>	SO2	90% control or <= 20 ppm
Yeast Propagators	CE-XX	Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Ethanol Fermenters	CE-XX	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm



Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	VOC	95% control
Stillage MR Vents	CE-XX	Scrubber (VOC) <sup>(1)</sup>	VOC	<= 20 ppm or Test and set <sup>(2)</sup>
Feedhouse Boiler No. 5	None	Permanent Shutdown (NOx)	NOx	N/A
Feedhouse Boiler No. 6	None	Permanent Shutdown (NOx)	NOx	N/A
Feedhouse Boiler No. 9	None	Permanent Shutdown (NOx)	NOx	N/A
Feedhouse Boiler No. 10	None	Permanent Shutdown (NOx)	NOx	N/A

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. Except for off-line RTO regeneration (i.e., bake-out) periods for RTOs not designed for on-line regeneration and not preceded by a WESP or equivalent, these startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

For RTOs not designed for on-line regeneration and not preceded by a WESP or equivalent, the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per year and individual off-line RTO regeneration periods shall be limited to no longer than 12 dryer operating hours for each period. Off-line RTO regeneration periods that can be completed during unrelated startup, shutdown, or malfunction periods are not included in these limitations. ADM may petition USEPA and Illinois EPA to adjust these limitations based on operating experience at any specific unit on which an RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

(2) Will follow the protocol in Section 10.0 of this CTP.

(3) A cold startup period is defined as that period of time when a coal-fired cogen boiler is proceeding to increase the temperature in the lower combustor from less than 400F to at least 1500F. This period shall last no more than 48 hours and NOx emissions data from this period shall be excluded when determining compliance with the optimized limits established pursuant to this section of the CTP. Ammonia injection shall begin as soon as the lower combustor temperature reaches 1500F and the cold startup period will end at this time. All data from cold startup periods after the first 48 hours, or while ammonia is injected in the boiler, will be included in determining compliance with the optimized limit.

### 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects , which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
Gluten Feed/Fiber Dryer No. 7	RTO
Carbon Furnace No. 1	RCO
Carbon Furnace No. 2	RCO
Carbon Furnace No. 3	RCO

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each emission reduction project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting down equipment, and any other details as applicable to each project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects will be installed based on the following schedule.

Emission Unit Description	Emission Reduction Project	Installation Deadline
Feed House Boiler 5	Permanent Shutdown	December 31, 2003
Feed House Boiler 6	Permanent Shutdown	December 31, 2003
Feed House Boiler 9	Permanent Shutdown	December 31, 2003
Feed House Boiler 10	Permanent Shutdown	December 31, 2003

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Cogen Boiler No. 1-6, 9/ SNCR	NOx	CEMs Part 60 Relative Accuracy Test Assessment (RATA)
	SO2	CEMs Part 60 RATA
Cogen Boiler No. 7 & 8	SO2	CEMs Part 60 RATA
Gluten Feed/Fiber Dryers No. 1-7/ RTO	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO2 (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Meal Dryers No. 1-2/ RTO	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO2 (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Carbon Furnace No. 1-3/ (RCO)	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), SO2 (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 6 or 6C, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Germ Dryers	VOC (inlet & outlet) <sup>1</sup> , SO2 (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 6 or 6C, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Yeast Propagators	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Stillage MR Vents	VOC (outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare
	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.

2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment. 3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A

calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).

## **10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

### SNCR Optimization Study

ADM has agreed to install and/or optimize SNCR systems on seven of its circulating fluidized bed cogeneration boilers at Decatur.

#### **Cogen Boilers 1 - 6**

Prior to the optimization study, ADM shall submit a study plan to USEPA and Illinois EPA for approval. The plan shall address the procedures and schedule for both the optimization and demonstration phases of the study. This plan must be submitted at least 30 days prior to beginning any optimization study. In lieu of submitting a study plan and conducting a study, ADM may submit documentation showing that a boiler is equivalent in design, size and operation to a unit for which an optimization study has all ready been completed and approved, and request that the results of the earlier study be applied to the equivalent unit(s). Such request shall be deemed approved if both USEPA and Illinois EPA fail to deny the request within 30-days of submission.

The optimization studies must be initiated within 180 days of initial startup of the SNCR systems, and SNCR system installation must be completed on a schedule that meets the requirements outlined in Paragraph 30 of the Consent Decree. The optimization studies have a presumptive duration of 12 months, but this duration can be extended by approval of the USEPA and Illinois EPA.

Following completion of the optimization studies, ADM shall submit proposed final emission limits in accordance with the requirements of Paragraph 36B of the Consent Decree. This submission will propose a 30-day rolling average NOx emissions limit based on the results of the optimization tests.

#### **Cogen Boiler 9**

ADM will complete the optimization study pursuant to the requirements defined in Illinois Permit Number 97050097.

### PM/PM10 & VOC Emissions Limits

ADM has agreed to establish PM/PM10 & VOC emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

## Attachment 5

**Control Technology Plan  
For Marshall, MN  
Wet Corn Mill**

March 14, 2003

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## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Minnesota PCA. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-034	Carbon Furnace No. 1	CE-078	RCO (VOC, CO, PM/PM10)
EU-028	Gluten Flash Dryer	CE-021	Optimization of Scrubber (VOC), Optimization of Burner (CO)
EU-037-048, 060	Ethanol Fermenters	CE-030 & 031	Optimization of Scrubber (VOC)
EU-064 & 065	Feedhouse & Stillage MR Vent	CE-046	Optimization of Scrubber (VOC)
EU-007 & 008	Millhouse Vent	CE-045	Optimization of Scrubber (VOC)
EU-XX	Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)
EU-049 & 050	Coal Boilers 1-2	N/A	Achieve Lowered Emission Limitation (SO <sub>2</sub> , NO <sub>x</sub> )

#### Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

#### Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and Minnesota PCA, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:

$$X \leq Y * (1-Z)$$

Where: X = lbs/hr emission rate post changes  
Y = lbs/hr emission rate pre changes  
Z = Control efficiency required by consent decree

- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to the USEPA and Minnesota PCA for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.

#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Minnesota PCA.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Carbon Furnace No. 1	CE-078	RCO (VOC, CO, PM/PM10)	Residence Time = > 0.9 seconds Temperature => 1600 °F
Gluten Flash Dryer	CE-021	Optimization of Scrubber (VOC), Optimization of Burner (CO)	Gas Flow Rate ≈ To Be Determined (TBD)* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Ethanol Fermenters	CE-030 & 031	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Feedhouse & Stillage MR Vent	CE-046	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Millhouse Vent	CE-045	Optimization of Scrubber (VOC)	Gas Flow Rate ≈ TBD* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*
Coal Boilers 1-2	N/A	Achieve Lowered Emission Limitation (SO <sub>2</sub> , NO <sub>x</sub> )	Heat Input: 90 MMBtu/hour (each)

\* Value to be determined once detailed engineering has been completed for the control equipment.

## 5.0 Monitoring Parameters for Pollution Control Device

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Minnesota PCA.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Carbon Furnace No. 1	CE-078	RCO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
Gluten Flash Dryer	CE-021	Optimization of Scrubber (VOC), Optimization of Burner (CO)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once each day
Ethanol Fermenters	CE-030 & 031	Optimization of Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once each day
Feedhouse & Stillage MR Vent	CE-046	Optimization of Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once each day
Millhouse Vent	CE-045	Optimization of Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once each day
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously
Coal Boilers 1-2	N/A	Achieve Lowered Emission Limitation (NOx)	Fuel Firing Rate (MMBtu's) <sup>(1)</sup>	n/a	TBD

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

(1) Fuel firing rate to be monitored only if a short-term limit (i.e.: 3-hour average) is selected.

### 6.0 Continuous Emission Monitors

The control equipment listed below shall be equipped with Continuous Emissions Monitors (CEMs). All monitoring data shall be collected, recorded and maintained on-site in accordance with the requirements of the Minnesota Pollution Control Agency Title V Permit No. 08300038-005 for the Marshall Facility. Any deviation of emission limits shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Parameter Monitored
Coal Boilers 1 & 2	SO <sub>2</sub>
	O <sub>2</sub> or CO <sub>2</sub>

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 21 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual reports and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Carbon Furnace No. 1	CE-078	RCO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
Gluten Flash Dryer	CE-021	Optimization of Scrubber (VOC) <sup>(1)</sup> , Optimization of Burner (CO) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
Ethanol Fermenters	CE-030 & 031	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Feedhouse & Stillage MR Vent	CE-046	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Millhouse Vent	CE-045	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC) <sup>(1)</sup>	VOC	95% control
Coal Boilers 1-2	N/A	Achieve Lowered Emission Limitation (SO2 & NOx)	SO2	SO2 emissions <= 1.2 lb/MMBtu on a 30-day rolling average
			NOx	Establishment of emissions limit <sup>(2)</sup>

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Minnesota PCA.

(2) Will follow the protocol in Section 10.0 of this CTP.

### 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules and/or future updated schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29 and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
Ethanol Fermenters	Optimization of Scrubber (VOC)

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting down equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects are subject to the compliance demonstration deadline listed.

Emission Unit Description	Emission Limit	Compliance Demonstration Deadline
Coal Boilers 1 & 2	SO <sub>2</sub> emissions <= 1.2 lb/MMBtu on a 30-day rolling average	May 31, 2003
	Submit to USEPA and Minnesota PCA proposed NO <sub>x</sub> emission limit.	18-months after lodging of Consent Decree



## 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Carbon Furnace No. 1	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Gluten Flash Dryer	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Feedhouse & Stillage MR Vent	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Millhouse Vent	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare
	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .
Coal Boilers 1-2	SO <sub>2</sub>	CEMs Per Title V Permit #08300038-005
	NO <sub>x</sub>	As applicable, Methods 1, 2, 3A or B, 4, and 7E (or approved alternate) if short term limit (ie: 3 hour average) or CEMs Part 60 Relative Accuracy Test Assessment if long term limit (ie: 30 day average)

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.

2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment.

3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq$  50 ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $<$  50 ppm as carbon).

## **10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

### PM/PM10 Emissions Limits

ADM has agreed to establish PM/PM10 emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

### NOx Emission Limits

ADM will establish a new NOx emissions limit for Marshall Boiler Nos. 1 and 2, that can be complied with over the long-term using the existing hardware. This limit will be established through a test protocol designed to evaluate the effects of readily controlled process variables (e.g., boiler load) on NOx emissions and CO emissions. After completion of the tests specified in this protocol and any additional tests that are mutually agreed upon, ADM will propose a NOx emissions limit in the form of "lb NOx/MMBtu" along with a proposed monitoring method and averaging time pursuant to the requirements of Paragraphs 36A and 36B of the Consent Decree. To demonstrate compliance with the proposed limit, ADM may elect to use either continuous monitoring (for a 30-day rolling average limit) or periodic source testing using approved reference methods or approved equal (for a 3-hour average limit). Only operating conditions that allow ADM to comply with its existing CO emissions limit will be considered in developing the final NOx limit for these boilers.

Attachment 6

**Control Technology Plan  
For Columbus, NE  
Wet Corn Mill**

March 14, 2003

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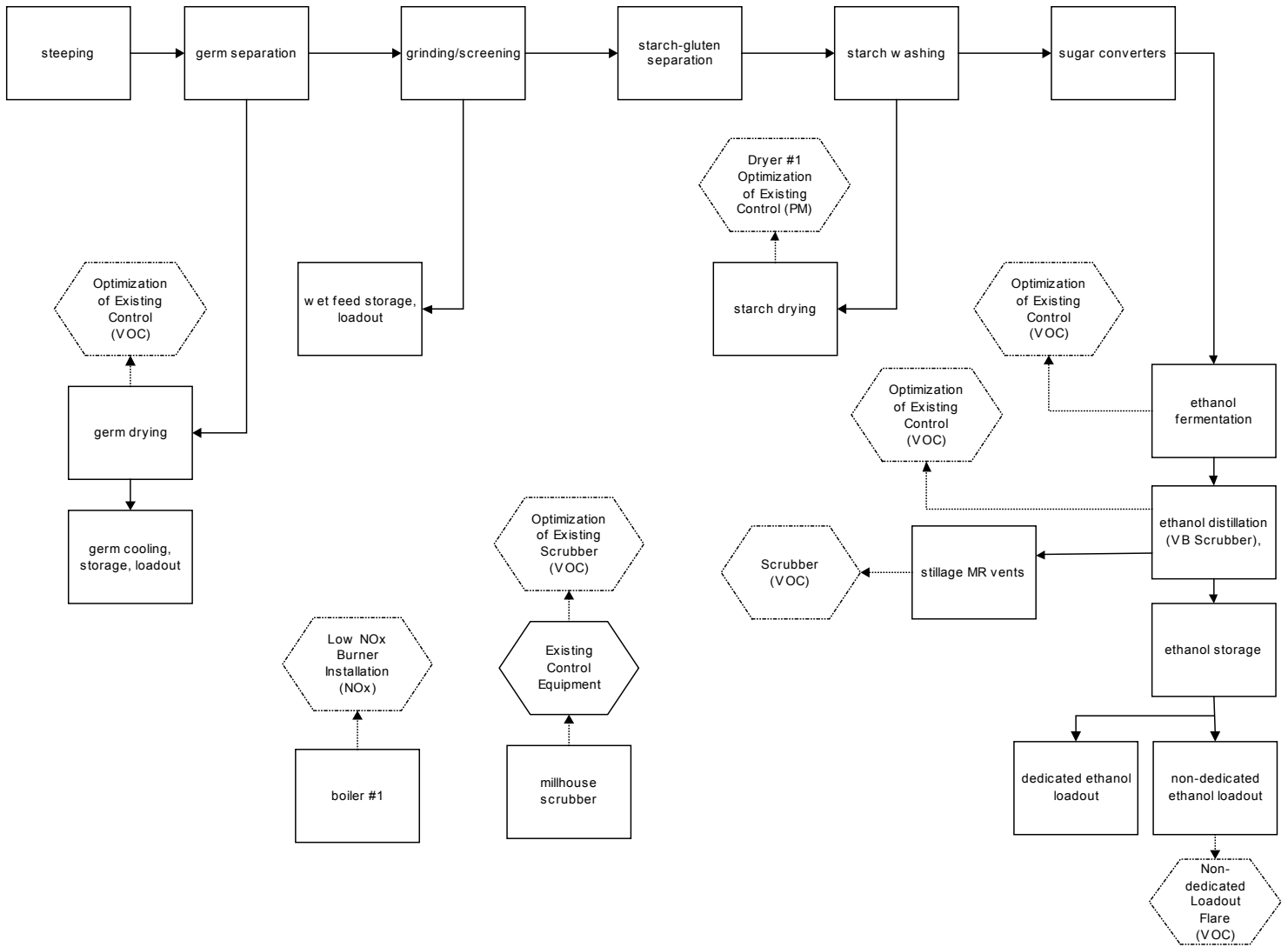
## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Nebraska DEQ. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
SV-69 & 70	Stillage MR Vents	CE-XX	Scrubber (VOC)
SV-32	Ethanol Fermenters	CE-32	Optimization of Scrubber (VOC)
SV-7	Germ Dryers 1-3	CE-7	Optimization of Scrubber (VOC)
SV-5	Millhouse Vent	CE-5	Optimization of Scrubber (VOC)
SV-34	VB (Distillation) Scrubber Vent	CE-34	Optimization of Scrubber (VOC)
SV-6	Starch Dryer #1	CE-6	Optimization of Scrubber (PM/PM10)
SV-38	Boiler #1	CE-38	Low NOx Burner (NOx)
SV-100	Non-dedicated Ethanol Loadout	CE-100	Flare (VOC)

#### Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

#### Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and Nebraska DEQ, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:

$$X \leq Y * (1-Z)$$

Where: X = lbs/hr emission rate post changes  
Y = lbs/hr emission rate pre changes  
Z = Control efficiency required by consent decree

- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to USEPA and Nebraska DEQ for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.



#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Nebraska DEQ.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Stillage MR Vents	CE-XX	Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Ethanol Fermenters	CE-32	Optimization of Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Germ Dryers 1-3	CE-7	Optimization of Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Millhouse Vent	CE-5	Optimization of Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
VB (Distillation) Scrubber Vent	CE-34	Optimization of Scrubber (VOC)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Starch Dryer #1	CE-6	Optimization of Scrubber (PM/PM10)	Gas Flow Rate $\approx$ TBD* scfm Pressure Drop $\Rightarrow$ TBD* in of water column Scrubbing Liquor Flow Rate $\Rightarrow$ TBD*
Boiler #1	CE-38	Low NOx Burner (NOx)	NOx emission rate $\leq$ 0.06 lbs/MMBtu
Non-dedicated Ethanol Loadout	CE-100	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*

\* Value to be determined once detailed engineering has been completed for these control devices.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Nebraska DEQ.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Stillage MR Vents	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Ethanol Fermenters	CE-32	Optimization of Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Germ Dryers 1-3	CE-7	Optimization of Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Millhouse Vent	CE-5	Optimization of Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
VB (Distillation) Scrubber Vent	CE-34	Optimization of Scrubber (VOC)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Starch Dryer #1	CE-6	Optimization of Scrubber (PM/PM10)	Pressure Drop Scrubbing Flow Rate	>= TBD* >= TBD*	Once each day
Non-dedicated Ethanol Loadout	CE-100	Flare	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

## **6.0 Continuous Emission Monitors**

No CEMS are required by the consent decree for the Columbus facility.

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 22 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual reports and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Stillage MR Vents	CE-XX	Scrubber (VOC) <sup>(1)</sup>	VOC	<= 20 ppm or Test and set <sup>(2)</sup>
VB (Distillation) Scrubber Vent	CE-34	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Ethanol Fermenters	CE-32	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Germ Dryers 1-3	CE-7	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Millhouse Vent	CE-5	Optimization of Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Starch Dryer #1	CE-6	Optimization of Scrubber (PM/PM10) <sup>(1)</sup>	PM/PM10	Establishment of emissions limit. <sup>(3)</sup>
Boiler #1	CE-38	Low NOx Burner (NOx) <sup>(1)</sup>	NOx	<= 0.06 lbs/MMBtu
Non-dedicated Ethanol Loadout	CE-100	Flare (VOC) <sup>(1)</sup>	VOC	95% control

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Nebraska DEQ.

(2) Will follow the protocol in Section 10.0 of this CTP.

(3) In no event shall the PM/PM10 emission limit for the starch dryer exceed 5.5 lb/hr. The limit for the dryer shall be the limit ADM proposes as a result of the increment modeling prescribed by section 8.0(c) of this CTP, if the proposed limit is less than or equal to 3.08 lb/hr. If it is not, then ADM shall optimize the existing scrubber, conduct performance tests and propose a limit no lower than 3.08 lb/hr based on such testing ("test-and-set"). In that event, the limit for the dryer shall be the lower of the limit that resulted from the modeling process or the limit that resulted from the 'test-and-set' process.

## 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
Non-dedicated Ethanol Loadout	Flare (VOC)

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects will be installed based on the following schedule.

Emission Unit Description	Emission Reduction Project	Installation Deadline
Boiler No. 1	Low NOx Burner	April 30, 2006
Starch Dryer #1	Optimization of Scrubber (PM/PM10)	April 30, 2005

c) The following schedule details the task to be completed for submission of a revised PSD application.

Task	Completion Date
Model facility PM10, NO2, and SO2 increment and NAAQS status with current configuration.	May 1, 2003
Model facility for PM10, NO2, and SO2 based on new controls, stack parameters, and other assumptions necessary to demonstrate increment and NAAQS modeled compliance.	August 1, 2003
Submit revised PSD application, which will address the road silt loading management plan and modeling, to Nebraska DEQ with timetable for proposed construction and modification dates for the projects to correct any remaining increment or NAAQS non-compliance. Thereafter, ADM shall promptly perform all measures within its ability and necessary to result in both issuance of the permit and correction of any such remaining increment or NAAQS non-compliance.	December 15, 2003

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission Unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Stillage MR Vents	VOC (outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane <sup>2, 3</sup> .
Germ Dryers 1-3	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane <sup>2, 3</sup> .
Millhouse Vent	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane <sup>2, 3</sup> .
Starch Dryer #1	PM/PM10 (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 5/202.
VB Scrubber Vent	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare
	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .
Boilers #1	NOx (outlet)	Methods 1, 2, 3A or B, 4, and 7E

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.
2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment.
3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).

## **10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

### PM/PM10 & VOC Emissions Limits

ADM has agreed to establish PM/PM10 & VOC emission limits, as applicable, for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

Attachment 7



# **Control Technology Plan For Peoria, IL Dry Corn Mill**

March 14, 2003

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**10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits**

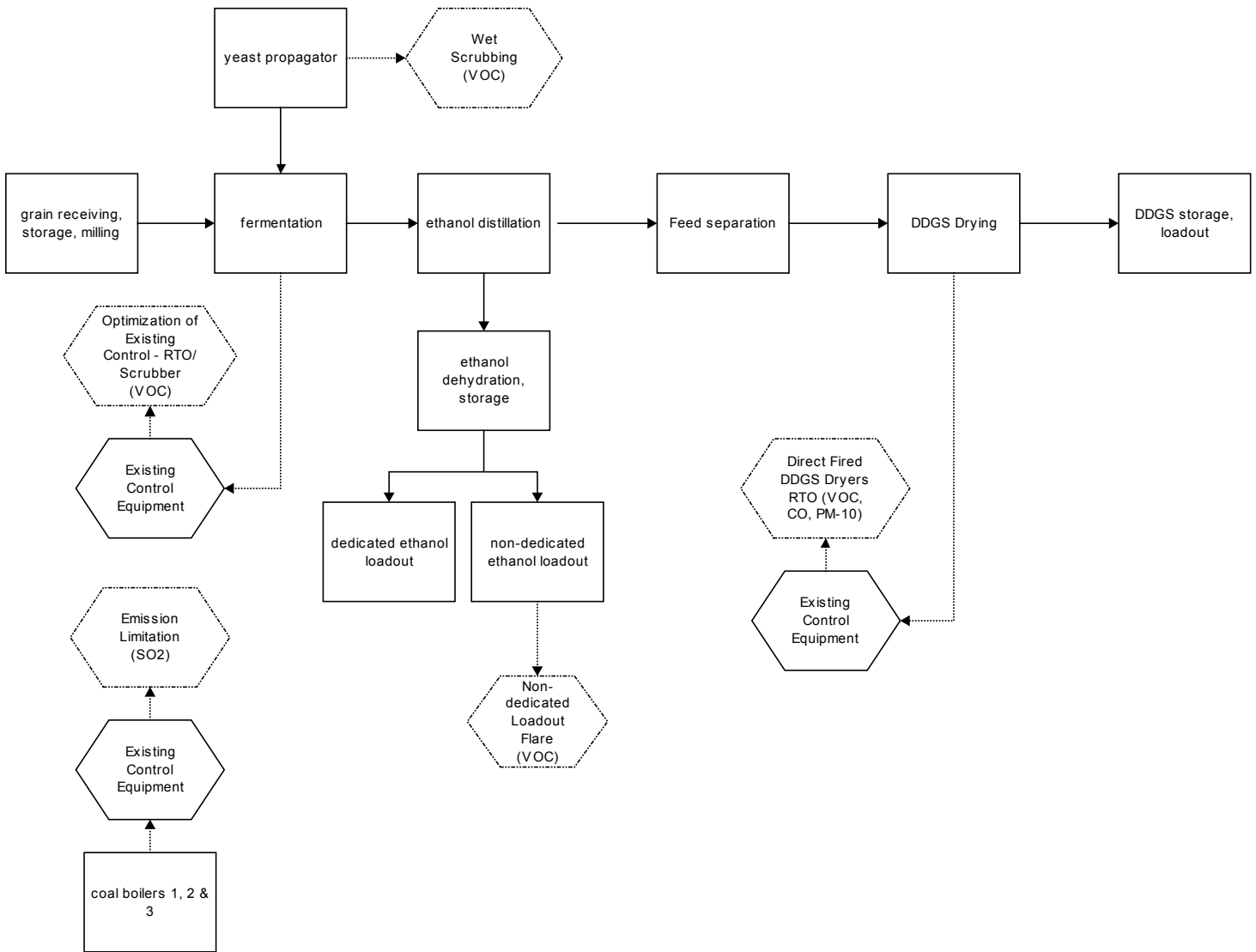
## 1.0 INTRODUCTION

This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.

## 2.0 Process Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-FH-101	Direct Fired Feed Dryers (RTO By-Pass Stream)	CE-XX	RTO (VOC, CO, PM/PM10)
EU-ML-290 to 292	Yeast Propagators	CE-XX	Scrubber (VOC)
EU-ML-301 & 302	Ethanol Fermenters	CE- ML-303	Optimization of RTO & Scrubber (VOC)
EU-AL101 & 104	Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)
EU-PH-101, 102, & 103	Coal Boilers No. 1-3	N/A	Meet SO2 limits

#### Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

#### Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and Illinois EPA, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:
  - Where: X = lbs/hr emission rate post changes
  - Y = lbs/hr emission rate pre changes
  - Z = Control efficiency required by consent decree
- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to USEPA and Illinois EPA for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.

#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Design Criteria Targets
Direct Fired Feed Dryers (RTO By-Pass Stream)	CE-XX	RTO (VOC, CO, PM/PM10)	Residence Time = > 0.65 seconds Temperature => 1600 °F
Yeast Propagators	CE-XX	Scrubber (VOC)	Gas Flow Rate ≈ To Be Determined (TBD)* scfm Pressure Drop => TBD* in of water column Scrubbing Liquor Flow Rate => TBD*
Ethanol Fermenters	CE-ML-303	Optimization of RTO & Scrubber (VOC)	Residence Time = > 0.48 seconds Temperature => 1625 °F
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Vapor Flow Rate (to flare) = TBD*

\* Value to be determined once detailed engineering has been completed for the control equipment.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Direct Fired Feed Dryers (RTO By-Pass Stream)	CE-XX	RTO (VOC, CO, PM/PM10)	Operating Temperature	>= TBD*	Continuously
Yeast Propagators	CE-XX	Scrubber (VOC)	Pressure Drop Scrubbant Flow Rate	>= TBD* >= TBD*	Once per day
Ethanol Fermenters	CE- ML-303	Optimization of RTO & Scrubber (VOC)	Operating Temperature  Pressure Drop Scrubbant Flow Rate	>= TBD*  >= TBD* >= TBD*	Continuously  Once per day Once per day
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC)	Presence of Pilot Flame	A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.	Continuously

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

### 6.0 Continuous Emission Monitors

The control equipment listed below shall be equipped with Continuous Emissions Monitors (CEMs). All monitoring data shall be collected, recorded and maintained on-site in accordance with the requirements of this section. Any deviation of emission limits shall be reported in the semi-annual reports and as required under other state and federal rules.

Emission Unit Description	Parameter Monitored
Coal Boilers No. 1, 2 & 3	SO2

The SO2 CEMS will meet the applicable requirements of 40 CFR Part 75, Subparts A, B, C, D, and E with the following exception: ADM is required to demonstrate that a flow monitor is technically infeasible under 40 CFR Part 75.11(c) or that it is economically impractical before submitting an alternative measurement procedure for approval to the Plaintiff(s). The requirements of 40 CFR Part 75, Subparts F, G, and H do not apply. ADM shall maintain sufficient records and submit sufficient data in the semi-annual reports required by the Consent Decree to demonstrate compliance with the applicable emission limits and as required under other state and federal rules.



## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 23 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual reports and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description	Pollutant	Emission Limit(s)
Coal Boilers 1, 2, & 3	N/A	N/A	SO2	Combined SO2 emissions <= 3,400 tons per rolling 12-month period
				Combined SO2 emissions <= 421 tons per rolling 30-day period
Direct Fired Feed Dryers (RTO By-Pass Stream)	CE-XX	RTO (VOC, CO, PM/PM10) <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
Yeast Propagators	CE-XX	Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Ethanol Fermenters	CE- ML-303	Optimization of RTO & Scrubber (VOC) <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Non-dedicated Ethanol Loadout	CE-XX	Flare (VOC) <sup>(1)</sup>	VOC	95% control

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and Illinois EPA.

(2) Will follow the protocol in Section 10.0 of this CTP.

### 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Emission Unit Description	Emission Reduction Project
Ethanol Fermenters	Optimization of RTO & Scrubber (VOC)

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting down equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects are subject to the compliance demonstration deadline listed.

Emission Unit Description	Emission Reduction Project	Compliance Demonstration Deadline
Coal Boilers 1, 2, & 3	Combined SO <sub>2</sub> emissions ≤ 421 tons per rolling 30-day period	March 31, 2007
Coal Boilers 1, 2, & 3	Combined SO <sub>2</sub> emissions ≤ 3,400 tons per rolling 12-month period	March 31, 2008

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	Test Method
Coal Boilers 1, 2, and 3	SO <sub>2</sub>	CEMs Part 75 Relative Accuracy Test Assessment (RATA)
Direct Fired Feed Dryers (RTO By-Pass Stream)	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM <sub>10</sub> (outlet),	As applicable, Methods 1, 2, 3A or B, 4, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Yeast Propagators	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup>	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Non-dedicated Ethanol Loadout	Visible Emissions	Per 40 CFR 60.18 for open flame flare
	VOC (inlet & outlet)	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used for enclosed flame flare <sup>2, 3</sup> .

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.

2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed on the exhaust from the final control equipment.

3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).

## **10.0 Procedures for Optimization of Control Equipment and Setting Emissions**

### PM/PM10 Emissions Limits

ADM has agreed to establish PM/PM10 emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

Attachment 8

**Control Technology Plan  
For Walhalla, ND  
Dry Corn Mill**

March 14, 2003

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**9.0 Pollution Control Equipment Performance Test Schedule and Test Methods**

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## 1.0 INTRODUCTION

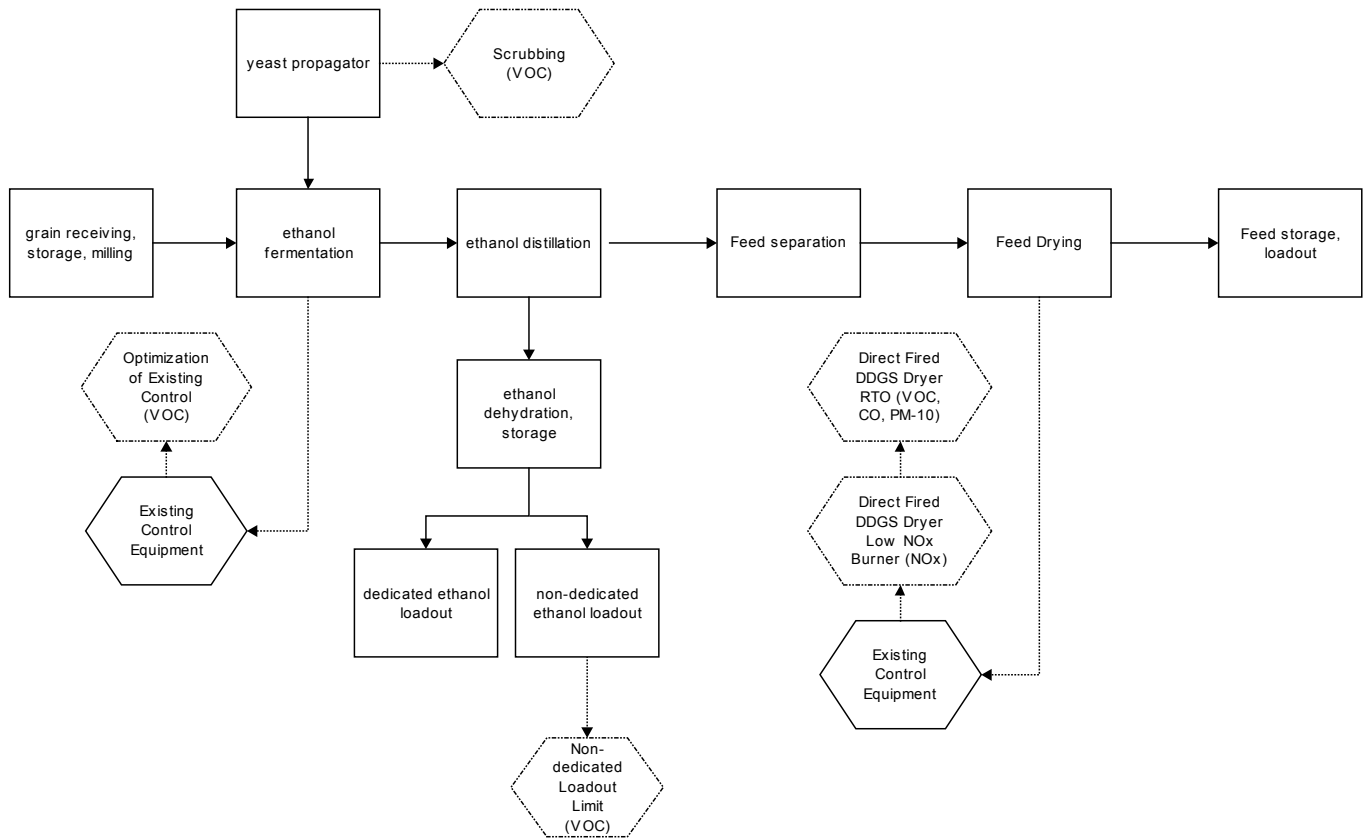
This Control Technology Plan (CTP) contains:

- a) Identification of all units to be controlled and/or optimized;
- b) Engineering design criteria for all proposed controls capable of meeting the emission levels required by Section IV of this Consent Decree;
- c) Monitoring parameters for all control equipment;
- d) Emission limits and required reductions for each pollutant as appropriate;
- e) A schedule for installation;
- f) Identification of all units to be emission tested under the Consent Decree and definition of the test methods that will be used;
- g) A procedure for establishing emission limits following start-up of emissions control equipment.



## 2.0 Process Flow Diagram

The following flow diagram presents the affected emission units and associated control technology.



### Notes:

1. Dashed line shapes indicate control equipment installation/optimization or shutdown required by the consent decree.
2. Process flow diagram intended to illustrate process units, which will have additional control added.
3. Process flow does not indicate all processes or products at this facility.

### 3.0 Emission Units Requiring Pollution Control Equipment or Optimization of Existing Control Equipment

The following emission units and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring pollution control technology or alternative projects designed to reduce emissions. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and North Dakota Department of Health. Changes in the requirements in the following table shall be accompanied by changes to the requirements in Sections 4, 5, 6, 9, and 10 of this CTP, as appropriate.

Emission Unit #	Emission Unit Description	Control Equipment #	Control Equipment / Optimization Description
EU-22	DDGS Dryer	CE-XX	RTO (VOC, CO, PM/PM10)
		CE-XX	Low NOx Burner (NOx)
EU-06A	Yeast Propagator	CE-06A	Scrubber (VOC)
EU-07	Ethanol Fermentation	CE-07	Optimization of Scrubber (VOC)
EU-12	Non-dedicated Ethanol Loadout	N/A	Loadout into non-dedicated trucks <= 15% of the total ethanol loaded out by volume per calendar year (VOC).

#### Alternative Control Equipment

ADM may substitute alternative control equipment for the equipment listed in this section, provided that ADM achieves the emission reductions specified in the Consent Decree.

#### Pollution Prevention/Source Reduction

ADM may substitute pollution prevention or source reduction measures for the control equipment listed in this section provided that ADM achieves the emission reductions specified in the Consent Decree.

- (1) For units with emissions that have been measured by the test methods specified in Section 9.0 of this CTP and for which results have been submitted to USEPA and North Dakota Department of Health, as summarized in Attachment 12 of the Consent Decree, achievement of equivalent emission reductions shall be determined by the following:
 
$$X \leq Y * (1-Z)$$
 Where:
  - X = lbs/hr emission rate post changes
  - Y = lbs/hr emission rate pre changes
  - Z = Control efficiency required by consent decree
- (2) Where emissions have not been previously measured by the test methods specified in Section 9.0, ADM shall submit a written notice and test plan to USEPA and North Dakota Department of Health for purposes of determining a pre-change baseline. Upon completion of the test this baseline shall be used for determining equivalent reductions as specified in item 1 above.
- (3) Where a concentration (ppm) limit is also specified in the Consent Decree for the emission unit, a final, post change outlet test can be used in lieu of the calculation in subparagraph (1), above, to determine equivalent emission reductions.

#### 4.0 Engineering Design Criteria for Pollution Control Equipment

Any deviation from the design criteria listed here shall be reported in the semi-annual reports and as required under other state and federal rules. Note that the specific design criteria listed here are preliminary and subject to change pending development of additional data. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and North Dakota Department of Health.

Control Equipment Description	Control Equipment #	Emission Unit Description	Design Criteria Targets
RTO	CE-XX	DDGS Dryer	Residence Time = > 0.65 seconds Temperature => 1600 °F
Low NOx Burner	CE-XX	DDGS Dryer	NOx emission rate <= 0.07 lbs/MMBtu
Scrubber (VOC)	CE-06A	Yeast Propagator	Gas Flow Rate ≈ TBD* scfm Pressure Drop = TBD* in of water column Scrubbing Liquor Flow Rate => TBD* gpm
Scrubber (VOC)	CE-07	Ethanol Fermenters	Gas Flow Rate ≈ 1400 scfm Pressure Drop => 4 in of water column Scrubbing Liquor Flow Rate => 20 gpm

\* Value to be determined once detailed engineering has been completed for the control equipment.

### 5.0 Monitoring Parameters for Pollution Control Equipment

Beginning no later than 30 days following startup of the control equipment described below, ADM shall monitor the parameters listed below. Changes to the requirements listed in the following table shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and North Dakota Department of Health. All monitoring data collected shall be recorded and maintained on-site. Any deviation of monitoring frequency, record keeping and/or range shall be reported in the semi-annual reports and as required under other state and federal rules.

Control Equipment #	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
CE-22b	RTO	Operating Temperature	>= TBD*	Continuously
CE-06A	Scrubber (VOC)	Scrubbant Flow Rate	>= TBD* gpm	Once each day
		Pressure Drop	TBD* inches of water column	Once each day
CE-07	Scrubber (VOC)	Scrubbant Flow Rate	>= 20 gpm	Once each day
		Pressure Drop	>= 4 inches of water column	Once each day
N/A	Truck Loadout Operations limit (VOC)	Non-dedicated truck loadout	Loadout into non-dedicated trucks <= 15% of the total ethanol loaded out by volume per calendar year.	Record total volume of ethanol loaded out per truck and whether it is a non-dedicated or dedicated truck.

\* Value to be proposed by ADM based on actual operating conditions at the time of the performance test.

## **6.0 Continuous Emission Monitors**

No CEMS are required by the consent decree for the Walhalla facility.

## 7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to Paragraph 21 of the Consent Decree. Any deviation from the emission limits shall be reported in the semi-annual report and as required under other state and federal rules. Where the "Emission Limits" column references "test and set," the procedure will be that outlined in Section 10.0 of this CTP.

Emission Unit Description	Control Device #	Control Equipment / Optimization Description	Pollutant	Emission Limits
DDGS Dryer	CE-22b	RTO <sup>(1)</sup>	VOC	95% control or <= 10 ppm
			CO	90% control or <= 100 ppm
			PM/PM10	Test and set <sup>(2)</sup>
		Low NOx Burner <sup>(1)</sup>	NOx	Test and set <sup>(2)</sup>
Yeast Propagator Vent	CE-06A	Scrubber <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Ethanol Fermenters	CE-07	Scrubber <sup>(1)</sup>	VOC	95% control or <= 20 ppm
Non-dedicated Ethanol Loadout	N/A	Limit	VOC	Loadout into non-dedicated trucks <= 15% of the total ethanol loaded out by volume per calendar year.

(1) All emission limitations (including operating parameter ranges and limits) apply at all times when the process equipment is operating, except, in the case of process equipment or pollution control systems, during previously planned startup and shutdown periods (including planned maintenance periods), and malfunctions as defined in 40 CFR Part 63. These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, ADM shall minimize emissions to the extent practicable. To the extent practicable, startup and shutdown of pollution control systems will be performed during times when process equipment is also shut down. Also, ADM shall, to the extent practicable, control emissions during a malfunction event in a manner consistent with good air pollution control practice for minimizing emissions.

In addition, for dryer(s) controlled by RTOs not designed for on-line regeneration (i.e., bake-out) and that are not preceded by a WESP or equivalent device(s), the emission limitations do not apply to periods of off-line RTO regeneration not to exceed 50 dryer operating hours per calendar year and individual off-line RTO regeneration periods not to exceed 12 dryer operating hours. For RTOs servicing more than one dryer, a dryer operating hour is any hour in which one or more of the dryers is on line. Off-line RTO regeneration while all associated dryers are shut down is not included in these operating limitations. Also, off-line RTO regeneration periods that can be completed during unrelated shutdown, or malfunction periods (i.e., periods not related to the need to perform an off-line RTO regeneration) are not included in these limitations (i.e., ADM may perform "preventative" off-line RTO regenerations during periods when the RTO is off-line for other reasons such as when the RTO is off-line due to maintenance or malfunction of upstream PM control equipment which requires bypass of the RTO). ADM may petition USEPA and [insert state agency] to adjust these operating limitations for a specific RTO based on operating experience with the RTO and the dryer(s) on which the RTO is installed. Changes to these regeneration hour limitations shall be considered non-material modifications under Paragraph 5 of the Consent Decree, provided ADM obtains written approval of the change(s) from USEPA and North Dakota Department of Health.

(2) Will follow the protocol in Section 10.0 of this CTP.

## 8.0 Schedules for Emission Reduction Projects

Any deviation from the applicable schedules shall be reported in the semi-annual reports and as required under other state and federal rules.

a) The following schedule implements paragraphs 28, 29, and 30 of the Consent Decree:

Primary Schedule - The following schedule is for emission reduction projects, which will begin implementation in the first calendar year following the lodging of the consent decree.

Process Description	Control Equipment Description
Ethanol Fermenters	Scrubber (VOC)
DDGS Dryer	Low NOx Burner (NOx)

Updated Schedule - For each subsequent calendar year for the life of the Consent Decree, ADM shall submit an updated schedule by January 30, as a part of the semiannual report required in Paragraph 44 of the Consent Decree, detailing the emission reduction projects to be undertaken during the upcoming calendar year. The updated schedule shall meet the implementation schedule required in the Consent Decree. The updated schedule shall include, if applicable, the following dates for each control project: date of change in operation, equipment shut-down date, equipment purchase date, equipment installation date, initial start-up date, and emission testing date. The updated schedule shall also include design criteria for new control equipment, method of decommissioning for permanently shutting down equipment, and any other details as applicable to each control project. Changes to the updated schedule shall be considered non-material modifications under Paragraph 5 of the Consent Decree.

b) The following projects are subject to the compliance demonstration deadline listed.

Emission Unit Description	Emission Reduction Project	Compliance Demonstration Deadline
Non-dedicated Ethanol Loadout	Loadout into non-dedicated trucks <= 15% of the total ethanol loaded out by volume per calendar year.	December 31, 2003

### 9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

ADM shall conduct the following performance testing pursuant to the requirements in this CTP and Paragraphs 33 and 34 in the Consent Decree.

Emission Unit/ Pollution Control Device	Pollutant(s) Tested <sup>1</sup>	TestMethod
DDGS Dryer	VOC (inlet & outlet) <sup>1</sup> , CO (inlet & outlet) <sup>1</sup> , PM/PM10 (outlet), NOx	As applicable, Methods 1, 2, 3A or B, 4, 7E, 5/202, 10, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Yeast Propagator Vent	VOC (inlet & outlet) <sup>1</sup> ,	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .
Ethanol Fermenters	VOC (inlet & outlet) <sup>1</sup> ,	As applicable, Methods 1, 2, 3A or B, 4, 18 as modified to include NCASI CI/WP-98.01, and 25 or 25A calibrated to propane will be used <sup>2, 3</sup> .

1. When any emissions limit in Section 7.0, expressed in ppm, is met, only outlet testing is required.
2. Tests to obtain VOC mass emission rates (i.e., Methods 1, 2, 3A or B, 4, and 18 as modified to include NCASI CI/WP-98.01 plus method 25) need only be performed during the initial performance test on the outlet of newly installed control equipment.
3. Outlet testing and control efficiency testing will be based on either Method 25 or Method 25A calibrated to propane, whichever is applicable depending on concentration (i.e., Method 25 is used on both the inlet and outlet when the outlet total hydrocarbon (THC) concentration is  $\geq 50$  ppm as carbon and Method 25A is used on both the inlet and outlet when the outlet THC concentration is  $< 50$  ppm as carbon).



## **10.0 Emission Limit Setting Procedures**

### PM/PM10 and NOx Emissions Limits

ADM has agreed to establish PM/PM10 and NOx emission limits for certain emissions units based on testing to be conducted following startup of the control equipment listed in Section 3.0 of this CTP. These limits are to be established pursuant to the requirements of Paragraphs 34, 36A, and 36B of the Consent Decree. ADM will conduct a minimum of one test (i.e., three 1-hour runs) using the methods specified in Section 9.0 of this CTP. ADM may, at its option, conduct additional tests on any emission unit to provide a more extensive database on which to base the unit's limit.

**Attachment 9**

# **VOC Control Technology Plan for ADM's Oilseed Plants**

**March 14, 2003**

## CONTENTS

### SECTION

- 1.0 INTRODUCTION
- 2.0 PROCESS FLOW DIAGRAMS
- 3.0 FACILITIES AND EMISSION UNITS REQUIRING PROCESS IMPROVEMENT EQUIPMENT
- 4.0 ENGINEERING DESIGN CRITERIA FOR PROCESS IMPROVEMENT EQUIPMENT
- 5.0 VOC EMISSION LIMITS
- 6.0 INSTALLATION SCHEDULE FOR PROCESS IMPROVEMENT EQUIPMENT
- 7.0 RECORDKEEPING AND REPORTING REQUIREMENTS FOR VOC EMISSION LIMITS
- 8.0 COMPLIANCE DETERMINATION PROCEDURES

## 1.0 INTRODUCTION

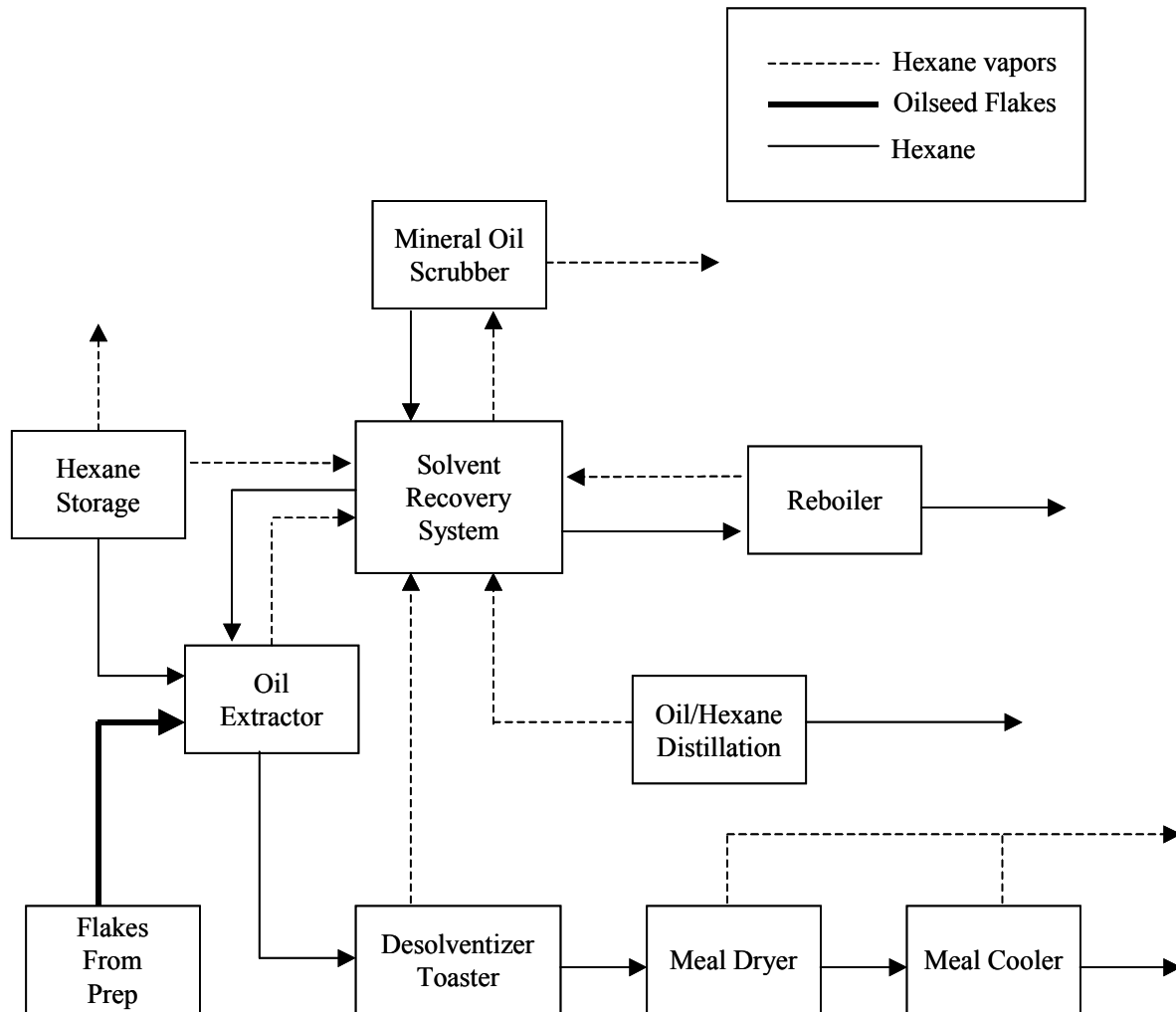
Archer Daniels Midland (ADM) signed a consent decree that requires ADM to implement a volatile organic compound (VOC) emission reduction program at 26 of its oilseed extraction plants in the United States. ADM, EPA, and the state plaintiffs prepared this Control Technology Plan (CTP) to fulfill the requirements of the Consent Decree for 25 of these oilseed plants (all plants except the Decatur East Specialty Soybean Plant). Section 5.2 contains a list of the 25 oilseed plants subject to this CTP. This CTP has been reviewed and approved by the parties for incorporation into the Consent Decree. This CTP contains:

- (a) Identification of all ADM facilities and projects proposed for process improvement;
- (b) Engineering design criteria for all proposed process improvement projects;
- (c) Method for determining interim and final VOC emission limits;
- (d) A schedule for expedited implementation of proposed projects with specific milestones; and
- (e) Recordkeeping and reporting requirements to demonstrate compliance with the final VOC emission limits.

## 2.0 PROCESS FLOW DIAGRAMS

### Diagram 2.1 General Process

The following process block diagram presents a general representation of the solvent extraction process at a typical ADM vegetable oil extraction facility.



### Diagram 2.2 Solvent Recovery System

On the following process flow diagram, Points A and B show where the upgraded condensers will be installed.



### **3.0 FACILITIES AND EMISSION UNITS REQUIRING PROCESS IMPROVEMENT EQUIPMENT**

As part of this consent decree, ADM shall implement a series of projects to upgrade the solvent recovery systems at its oilseed plants to include at a minimum:

A dedicated “extractor condenser” will be located between the extractor and the vent condenser. Its function is to reduce the vapor loading to the vent condenser. (See Point A on Diagram 2.2)

A once-through cold water condenser will be located between the vent condenser and the mineral oil absorber. The purpose of this condenser is to condense hexane vapors and reduce the vapor loading to the mineral oil absorber. (See Point B on Diagram 2.2)

Some ADM plants will require the installation of both types of condensers previously described, other plants will require installation of only one of the condenser types, and some of ADM’s oilseed extraction plants are already equipped with both types of condensers. At the completion of the projects listed in this section, all of ADM’s oilseed plants subject to this CTP will be equipped with both types of condensers.

Operation of the proposed condensers is expected to improve process performance by reducing VOC loading on, or improving effectiveness of, the current solvent recovery system. These process improvement projects will aid each plant in lowering overall VOC emissions. Installation of the condenser upgrades is one action ADM plants will implement to reduce overall VOC emissions in order to comply with the interim and final facility VOC emission limits described in Section 5.0 of this CTP.

The following ADM facilities and process points have been designated as affected units in the consent decree and have requirements for the installation of process improvement equipment.

Facility	Process Improvement Equipment Description	Location of Process Improvement Point
Decatur West (corn germ plant), Illinois Des Moines, Iowa Enderlin, North Dakota Kershaw, South Carolina Little Rock, Arkansas Lubbock, Texas Mexico, Missouri Memphis, Tennessee Quincy East, Illinois Quincy West, Illinois Richmond, Texas Valdosta (soybean plant), Georgia Valdosta (cottonseed plant), Georgia	Extractor Condenser	Extractor vent (Point A in process flow diagram)
Clinton, Iowa Decatur West (corn germ plant), Illinois Decatur West (soybean plant), Illinois Enderlin, North Dakota Frankfort, Indiana Galesburg, Illinois Kershaw, South Carolina Little Rock, Arkansas Lubbock, Texas Mankato, Minnesota Mexico, Missouri North Kansas City, Missouri Quincy East, Illinois Quincy West, Illinois Red Wing, Minnesota Richmond, Texas Valdosta (soybean plant), Georgia Valdosta (cottonseed plant), Georgia Velva, North Dakota	Once-through cold-water condenser	Prior to mineral oil absorber (Point B in process flow diagram)

**4.0 ENGINEERING DESIGN CRITERIA FOR PROCESS IMPROVEMENT EQUIPMENT**

After identifying the affected units that require installation of process improvement equipment, ADM shall conduct a design and engineering review of each affected unit to size the process improvement equipment (i.e., condenser upgrade) as required by the consent decree. The criteria listed in this section will be the basis for sizing the required condenser upgrades.



<b>Process Improvement Equipment Description</b>	<b>Design Criteria</b>
Extractor condenser	Minimum of 0.65 ft <sup>2</sup> per ton crush capacity
Once-through cold-water condenser	Minimum of 94 ft <sup>2</sup> surface area

## 5.0 VOC EMISSION LIMITS

ADM shall comply with emission limits established under the Consent Decree and shall incorporate all final VOC Solvent Loss Ratio (SLR) limits in federally enforceable operating permits for each plant.

### 5.1 Interim Limits

(a) By no later than 90 days following lodging of the Consent Decree, ADM shall begin to account for solvent loss and quantity of oilseeds processed to comply with the following VOC solvent loss ratio (“SLR”) limits at the following nine plants:

<b>Plant</b>	<b>Oilseed Type</b>	<b>SLR Limit (gal/ton)</b>
Decatur, Illinois	Corn Germ	0.31
Goodland, Kansas	Sunflower	0.34
Mankato, Minnesota	Conventional Soybean	0.15
Memphis, Tennessee	Large Cottonseed	0.37
Mexico, Missouri	Conventional Soybean	0.18
Richmond, Texas	Small Cottonseed	0.25
Valdosta, Georgia	Conventional Soybean	0.15
Valdosta, Georgia	Large Cottonseed	0.30
Velva, North Dakota	Canola	0.33

The first compliance determination will be based on the first 12 operating months of data collected after the date on which ADM begins to account for solvent loss under this paragraph. “Operating month” is defined according to the definition provided in 40 C.F.R. Part 63, Subpart GGGG.

(b) By no later than April 12, 2003, ADM shall begin to account for solvent loss and quantity of oilseeds processed to comply with a VOC SLR limit of 0.20 gal/ton at the following

three plants:

- C Fostoria, Ohio
- C Fremont, Nebraska
- C Lincoln, Nebraska

The first compliance determination will be based on the first 12 operating months of data collected after the date on which ADM begins to account for solvent loss under this paragraph.

## 5.2 Final Permit Limits

(a) By no later than Dec, 31, 2007, ADM shall propose in writing to the Plaintiffs final VOC SLR limits for each oilseed facility (except the Decatur East plant) that satisfy the requirements of this Subsection 5.2.

(b) Except for multi-seed plants, the capacity-weighted average of these final VOC SLR limits for each oilseed group shall not exceed the following category VOC SLR limits:

0.175 gal/ton for conventional soybean plants

0.33 gal/ton for large cottonseed plants

0.35 gal/ton for canola and small cottonseed plants

0.30 gal/ton for corn germ and sunflower plants.

The capacity weighted averages of the final VOC SLR limits are to be calculated using the following equations:

$$\text{Conventional Soybean} = \Sigma(\text{Seed}_i * \text{SLR}_i) / \Sigma(\text{Seed}_i) \#0.175 \text{ gal/ton}$$

$$\text{Large Cottonseed} = \Sigma(\text{Seed}_i * \text{SLR}_i) / \Sigma(\text{Seed}_i) \#0.33 \text{ gal/ton}$$

$$\text{Canola/Small Cottonseed} = \Sigma(\text{Seed}_i * \text{SLR}_i) / \Sigma(\text{Seed}_i) \#0.35 \text{ gal/ton}$$

$$\text{Corn Germ/Sunflower} = \Sigma(\text{Seed}_i * \text{SLR}_i) / \Sigma(\text{Seed}_i) \#0.30 \text{ gal/ton}$$

Where:  $\text{Seed}_i$  = Crush capacity of oilseed plant i; and  
 $\text{SLR}_i$  = Final SLR Limit for oilseed plant i.

(c) For multi-seed plants, the final VOC SLR limit shall be:

Compliance Ratio # 0.90

Where:  $\text{Compliance Ratio} = \text{Actual Solvent Loss} / \Sigma[(\text{Crush}_i) * (\text{SLF}_i)];$

Actual Solvent Loss = Gallons of actual solvent loss during previous 12 operating months excluding any allowable losses during malfunction periods as defined in Paragraph 74 of the Consent Decree;

Crush<sub>i</sub> = Tons of each oilseed type “i” processed during the previous 12 operating months; and

SLF<sub>i</sub> = The corresponding solvent loss factor (gal/ton) for oilseed “i” as listed in Table 1 of 40 C.F.R. § 63.2840.

(d) The specific ADM oilseed plants included in each of the categories under (b) and (c) above are listed below:

**Summary of ADM Oilseed Plant Names by Oilseed Type**

<b>Consent Decree Oilseed Category</b>	<b>Plant Name, State</b>	<b>Oilseed(s) Processed</b>
Conventional Soybean	Decatur West, Illinois Des Moines, Iowa Fostoria, Ohio Frankfort, Indiana Fremont, Nebraska Galesburg, Illinois Kershaw, South Carolina Lincoln, Nebraska Little Rock, Arkansas Mankato, Minnesota Mexico, Missouri North Kansas City, Missouri Quincy East, Illinois Quincy West, Illinois Valdosta, Georgia	Soybean (at each plant)
Large Cottonseed	Memphis, Tennessee Valdosta, Georgia	Large Cotton Large Cotton
Small Cottonseed/Canola	Richmond, Texas Velva, North Dakota	Small Cotton Canola
Corn Germ/Sunflower	Clinton, Iowa Decatur West, Illinois Goodland, Kansas	Corn Germ, wet Corn Germ, wet Sunflower
Multiseed Plants	Enderlin, North Dakota Lubbock, Texas Red Wing, Minnesota	Canola, Soybean, Sunflower Corn Germ, Large Cotton, Peanuts Canola, Flax, Sunflower

(e) The capacity-weighted averages under (b) above shall be based on the design capacity at for each plant that has been approved by the Plaintiffs under Paragraph 68 of the Consent Decree. For purposes of this Consent Decree, design capacity is the “maximum permitted crush capacity” that a plant is allowed to process in a given time period under its operating permit; or, if no limit is included in the operating permit, the plant’s maximum physical capacity. This number is expressed as “tons of crush per day.”

(f) All plants must also simultaneously comply with any applicable limits found in the state or federal operating permits.

## **6.0 INSTALLATION SCHEDULE FOR PROCESS IMPROVEMENT EQUIPMENT**

By no later than the dates set forth in this section, ADM shall upgrade its oilseed plants so that all plants have condenser systems that include, at a minimum, a dedicated “extractor condenser” for the extractor and a once-through cold water condenser following the vent condenser. These condenser upgrades shall be completed on the following schedule:

11 plants (50%)	by April 1, 2004
16 plants (75%)	by April 1, 2005
21 plants (100%)	by April 1, 2006 <sup>1</sup>

Section 3.0 above, identifies the ADM plants that will receive these condenser upgrades.

## **7.0 RECORDKEEPING AND REPORTING REQUIREMENTS FOR VOC EMISSION LIMITS**

To demonstrate compliance with the final VOC SLR limits at the oilseed plants, ADM shall

(a) maintain the records required by 40 C.F.R. Part 63, Subpart GGGG on solvent loss and quantity of oilseed processed; and

(b) maintain the records required by 40 C.F.R. Part 63, Subpart GGGG, for any malfunction period as defined in Section 8.0 below.

Condenser Project Reports. In the semiannual reports due on July 30, of 2004, 2005 and 2006, ADM shall submit reports to Plaintiffs identifying the plants at which upgraded condenser systems have been installed since the last reporting period and ADM’s tentative projections for the remaining installations, to demonstrate that the deadlines in Section 6.0 have been and will be met. For any plant not operating on April 1, 2006, the report shall be submitted 30 days after the installation deadline under Section 6.0.

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<sup>1</sup> Or the first day of the plant’s first normal operating period thereafter under 40 C.F.R. Part 63, Subpart GGGG, if the plant is not operating on April 1, 2006.

## 8.0 COMPLIANCE DETERMINATION PROCEDURES

Solvent Loss Ratio (SLR) Limits. Compliance with the interim and final VOC SLR limits in this Consent Decree shall be determined in accordance with 40 C.F.R. Part 63, Subpart GGGG, with the following exceptions: (1) provisions pertaining to HAP content shall not apply; (2) monitoring and recordkeeping of solvent losses at each plant shall be conducted daily; (3) solvent losses and quantities of oilseed processed during startup and shutdown periods shall not be excluded in determining solvent losses; and (4) records shall be kept in the form of the following table that show total solvent losses, solvent losses during malfunction periods, adjusted solvent losses (i.e., total solvent losses minus malfunction losses) monthly and on a twelve-month rolling basis.

Solvent Loss Record for ADM Oilseed Plant X

Date	Total Crush (tons)		Total Solvent Loss (gallons)		Malfunction Period Solvent Loss (gallons)		Adjusted Solvent Loss <sup>a</sup> (gallons)		SLR <sup>b</sup> (gal/ton)
	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	12-Month Rolling
Month -Year									

<sup>a</sup> - Adjusted Solvent Loss is equal to Total Solvent Loss minus Malfunction Period Loss.

<sup>b</sup> - Solvent Loss Ratio is equal to 12-month rolling Adjusted Solvent Loss divided by 12-Month Rolling Total Crush. Compliance determination for each plant is based on 12-Month Rolling SLR value compared to Final VOC SLR Limit.

Malfunctions. ADM may apply the provisions of 40 C.F.R. Part 63, Subpart GGGG pertaining to malfunction periods only when the conditions in both subparagraph (i) and (ii) are met:

- (i) The malfunction results in a total plant shutdown. For purposes of this Consent Decree, a “total plant shutdown” means a shutdown of the solvent extraction system.
- (ii) Cumulative solvent losses during malfunction periods at a plant do not exceed 4,000 gallons in a 12-month rolling period.

At all other times, ADM must include all solvent losses when determining compliance with its interim or final VOC SLR limits at each plant.

During a malfunction period, ADM shall comply with the startup, shutdown and malfunction (SSM) plan as required under Subpart GGGG for the plant. The solvent loss corresponding to a malfunction period will be calculated as the difference in the total solvent inventories for the day before the malfunction period began and the day the plant resumes normal operation.

# **VOC Control Technology Plan for ADM's Decatur East Specialty Soybean Plant**

**March 14, 2003**

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## **1.0 INTRODUCTION**

Archer Daniels Midland Company (ADM) signed a consent decree that requires ADM to implement an emission reduction program at the specialty soybean oilseed extraction plant it operates in Decatur, Illinois (Decatur East Plant). ADM, United States Environmental Protection Agency (EPA) and the Illinois Environmental Protection Agency (IEPA) prepared this Control Technology Plan (CTP) to implement the requirements of the consent decree. This CTP has been reviewed and approved by the parties for incorporation into the consent decree. This CTP contains:

- (a) Summary of the emission reduction program at Decatur East;
- (b) Flow diagrams of the processes before and after the VADS technology is installed;
- (c) Identification of emission units to be controlled;
- (d) Engineering design criteria for all proposed controls;
- (e) A schedule for expedited installation with specific milestones applicable on a unit-by-unit basis;
- (e) Monitoring, recordkeeping, and reporting requirements for all control equipment;
- (f) Methodology for determining a final solvent loss limit for the facility; and
- (g) Methodology for determining compliance with the final solvent loss limit.

## **2.0 PROGRAM SUMMARY**

ADM shall implement a program with the goal of achieving a reduction of 90% or greater in VOC emissions from the white flake lines at the Decatur East Plant. Appendix A includes a flow diagram of the current solvent extraction process at the Decatur East Plant. The first step of this program consists of piloting a Vacuum Assisted Desolventizing System (VADS) on one white flake line. If this technology meets the product quality criteria and reasonably meets the other performance criteria in Section 5.0 of the CTP, ADM will install it on the other white flake lines according to the schedule in Section 6.1. If it does not, ADM must conduct engineering evaluations and, if appropriate, a pilot program, directed toward identifying an alternative technology that is technologically and economically feasible, and has all necessary regulatory clearances under the Federal Food, Drug, and Cosmetic Act (FFDCA). If such an alternative technology is identified, ADM must install it on one of its white flake lines. If this alternative technology meets the product quality criteria and reasonably meets the performance criteria specified in Section 5.0 of the CTP, then ADM will install the alternative technology on one or both of its other white flake lines according to the schedule outlined in Section 6.2. The



emission reduction benefits from this program will be addressed in the final VOC solvent loss ratio (SLR) limit for the plant, which will be established pursuant to Paragraph 70 of the Consent Decree and Section 8.0 of this CTP.

Appendix D contains a diagram that summarizes the decision process that ADM, EPA, and IEPA will use to implement the emission reduction program at the Decatur East Specialty Soybean plant.

### 3.0 PROCESS FLOW DIAGRAMS

Appendix A presents a flow diagram of the current process and equipment at the Decatur East Plant. Appendix B contains a flow diagram of the process after installing the VADS technology to replace the deoderizer units at the Decatur East Plant. Appendix C shows a flow diagram of the VADS technology and summarizes the protocol for sampling residual VOC in the white flakes.

### 4.0 EMISSION UNITS REQUIRING POLLUTION CONTROL EQUIPMENT

The following emission units have been designated as affected units in the consent decree and have requirements for the installation of process improvement equipment or pollution control technology. Appendix A contains a flow diagram of these emission units.

Emission Unit Description	Control Equipment Description (Pollutant)
one of three white flake lines	VADS (VOC)
remaining two white flake lines	VADS or alternative technology (VOC)

VOC - Volatile organic compounds; includes all VOCs in the extraction solvent used at the Decatur East Plant.

### 5.0 ENGINEERING DESIGN CRITERIA FOR VADS TECHNOLOGY AND ALTERNATIVE CONTROL TECHNOLOGY

ADM will first install a Vacuum Assisted Desolventizing System (VADS) on one white flake line. If the VADS technology meets the product quality criteria and reasonably meets the other performance criteria in the table below, ADM will install it on the other white flake lines, or a single VADS on both lines, according to the schedule in Section 6.1 (See footnote “a” below). If it does not, ADM must conduct engineering evaluations and, if appropriate, a pilot program, directed toward identifying an alternative technology that is technologically and economically feasible, and reasonably meets the performance criteria specified in the table below. If such an alternative technology is identified, ADM must install it on one or both of its other white flake lines according to the schedule outlined in Section 6.2.

<sup>a</sup> - EPA and IEPA will have the opportunity to review and approve ADM’s determination whether the VADS or alternative technology meets the product quality criteria and reasonably meets the performance criteria below when they review the performance report submitted by ADM 21 months after the consent decree is lodged.

Technology Description	Product Quality Criteria	Performance Criteria
Vacuum Assisted Desolventizing System (VADS)	<b>PDI:</b> ~ 55 and #63 for “60” white flakes <b>PDI:</b> ~ 80 and # 90 for “90” white flakes <b>Moisture:</b> # 9% in white flakes <b>Fines:</b> #30%, <20 Mesh <b>Temp. flakes exiting cooler:</b> #110 <sup>o</sup> F	<b>Residual VOC:</b> # 400 ppm by weight in white flakes exiting VADS
Alternative Technology	<b>PDI:</b> ~ 55 and #63 for “60” white flakes <b>PDI:</b> ~ 80 and #90 for “90” white flakes <b>Moisture:</b> #9% in white flakes <b>Fines:</b> #30%, <20 Mesh <b>Temp. flakes exiting cooler:</b> #110 <sup>o</sup> F	90% VOC control efficiency for white flake cooler vents <sup>b</sup>

VOC - Volatile Organic Compounds; includes all VOCs in the extraction solvent used at the Decatur East plant.

PDI - Protein Dispersibility Index

<sup>b</sup> - The 90% control efficiency is a target; ADM shall evaluate alternative control technologies with control efficiencies lower than 90% if it is determined that the control technology is technically feasible and cost-effective.

## 6.0 INSTALLATION SCHEDULE FOR VADS TECHNOLOGY AND ALTERNATIVE CONTROL TECHNOLOGY

ADM will first install a Vacuum Assisted Desolventizing System (VADS) on one white flake line . If this technology meets the product quality criteria and reasonably meets the performance criteria in Section 5.0, then ADM will install it on the other white flake lines according to the schedule in Table 6.1 below.

**Table 6.1 Vacuum Assisted Desolventizing System (VADS) Technology**

Milestone	Deadline
Complete Installation of first VADS on one white flake line	12 months after lodging of consent decree
Evaluation Period Ends for first VADS / Submit Performance Report	21 months after lodging of consent decree
Complete Installation of other VADS on other white flake lines	33 months after lodging of consent decree <sup>a</sup>
Solvent Loss Ratio Limit for facility	63 months after lodging of consent decree <sup>a,b</sup>

<sup>a</sup> - Associated deadlines are based on EPA and IEPA approval and therefore, may be delayed accordingly. These deadlines are only applicable if the first VADS installation meets the product quality criteria and reasonably meets the other performance criteria in Section 5.0 of the CTP.

<sup>b</sup> - The first compliance determination will be based on the first 12 operating months of data collected after the date on which the final VOC SLR limit is proposed. "Operating month" is defined according to the definition provided in 40 C.F.R. Part 63, Subpart GGGG.

ADM will install an alternative control technology if the VADS technology does not meet the product quality criteria or does not reasonably meet the performance criteria provided in Section 5.0 of this CTP. ADM will first submit an evaluation report to EPA and IEPA including a determination of whether one or more of the alternative technologies is technically feasible, cost effective, and has all FFDCA regulatory clearances, and is likely to achieve 90% VOC control efficiency. If these criteria are not met, and EPA and IEPA determine that all potentially applicable alternative technologies have been reasonably evaluated, then ADM will establish a Final SLR Limit for the Decatur East facility pursuant to Section 8.0. If one or more of the alternative technologies is technically feasible, cost effective, and has all FFDCA regulatory clearances, and is likely to achieve 90% VOC control efficiency, then ADM will submit a plan for the installation of one alternative control technology on one of the white flake lines. The plan will include an installation schedule with interim milestones. ADM will install the alternative control technology on one white flake line according to the schedule provided in Table 6.2 below. Seven months after the first installation is completed, ADM will submit a performance report. If it is determined that the alternative control technology meets the product quality criteria, is cost effective and reasonably meets the other performance criteria specified in Section 5.0, then ADM will install it on one or both of the other white flake lines according to the schedule in Table 6.2 below.

**Table 6.2 Alternative Control Technology**

<b>Milestone</b>	<b>Deadline</b>
Evaluation Report of Alternative Technologies	21 months after lodging of consent decree <sup>a</sup>
Plan for Installation of Alternative Control Technology on one white flake line	21 months after lodging of consent decree <sup>a</sup>
Vendor Selection	TBD in Plan for Installation
Ordering Equipment	TBD in Plan for Installation
Complete Installation of Equipment on one white flake line	TBD in Plan for Installation
Evaluation Period Ends / Performance Report	7 months after installation completed
Plan for Installation on other white flake lines	TBD in second Plan for Installation
Ordering Equipment	TBD in second Plan for Installation
Complete Installation on other white flake lines	TBD in second Plan for Installation
Solvent Loss Ratio Limit for facility	30 months after all equipment is installed <sup>b</sup>

<sup>a</sup> - This deadline could be extended if ADM requests an extension prior to the 21-month deadline and EPA approves this request.

<sup>b</sup> - The first compliance determination will be based on the first 12 operating months of data collected after the date on which the final VOC SLR limit is proposed. "Operating month" is defined according to the definition provided in 40 C.F.R. Part 63, Subpart GGGG.

TBD - To be determined as discussed in Section 2.0; an alternative control technology will be determined if the VADS technology is not successful.

## **7.0 MONITORING, RECORDKEEPING AND REPORTING FOR VADS TECHNOLOGY AND ALTERNATIVE CONTROL TECHNOLOGY**

### **7.1 Monitoring and Record Keeping Requirements**

The following table summarizes the parameters, ranges, frequencies and test methods that will be used by ADM to monitor the VADS technology and determine whether the technology meets the product quality and performance criteria specified in Section 5.0. If an alternative control technology is determined to be necessary, as explained in Section 2.0, then the monitoring parameters and test methods for the alternative technology will be established when ADM submits the evaluation report and installation plan.

<b>Technology Description</b>	<b>Parameter(s) Monitored</b>	<b>Operating Range(s)</b>	<b>Monitoring/ Record Keeping Frequency</b>	<b>Monitoring Test Method</b>
Vacuum Assisted Desolventizing System (VADS)	Residual VOC	# 400 ppm by weight in white flakes exiting VADS	Daily	AOCS Ba14-87
	PDI	~ 55 and #63 for "60" white flakes; ~ 80 and #90 for "90" white flakes	Daily	AOCS Ba 10-65
	Moisture	# 9 %	Daily	AOCS Ba2a-38
	Fines	#30 %, <20 Mesh	Daily	ADM Cp-1d-63 (dry screen)
	Temp. of flakes exiting cooler	110 °F (maximum)	Daily	Temperature probe
Alternative Technology	TBD	TBD	TBD	TBD

VOC - Volatile Organic Compounds; includes all VOCs in the extraction solvent used at the Decatur East plant.

PDI - Protein Dispersibility Index

TBD - To be determined as discussed in Section 2.0; an alternative control technology will be determined if the VADS technology is not successful.

ppm - parts per million

AOCS Ba14-87 - Total Hexane Content in Extracted Meals

AOCS Ba 10-65 - Protein Dispersibility Index

AOCS Ba 2a-38 - Moisture and Volatile Matter (vacuum oven)

ADM Cp-1d-63 - Screen Test Mechanical

All monitoring data collected above shall be recorded and maintained on-site.

After the date of proposal of final VOC SLR limits, ADM shall maintain the records required by 40 C.F.R. Part 63, Subpart GGGG on solvent loss and quantity of oilseed processed.

After the date of proposal of final VOC SLR limits, ADM shall maintain the records required by 40 C.F.R. Part 63, Subpart GGGG for any malfunction period as defined in Section 9.0 below.

## **7.2 Reporting Requirements**

ADM shall include in the semiannual reports required under Paragraph 44 of the Consent Decree reports on its compliance with deadlines and milestones in Sections 6.1 and 6.2 for vendor selection, equipment ordering and equipment installation.

Any deviation from the parameter to be monitored, frequency, or test method that is listed in Section 7.1 shall be reported in the semi-annual reports and as required under other state and federal rules.

## **8.0 FINAL SOLVENT LOSS RATIO LIMIT FOR DECATUR EAST FACILITY**

ADM shall propose a final VOC SLR limit for the Decatur East specialty soybean plant, not later than two and one-half years (30 calendar months) after: (1) completing installation of the last emission reduction project pursuant to Paragraphs 46 through 55 above; or (2) a determination that no emission reduction project beyond a pilot scale installation is required under Paragraphs 49 through 58 in the Consent Decree. The final VOC SLR limit shall be based upon at least two years of data (unless ADM determines that less operating data is sufficient), process variability, a reasonable certainty of compliance, and all other available and relevant information. EPA and IEPA will review the final VOC SLR limit proposed by ADM and will either: (a) Approve ADM's proposed SLR limit, or (b) Propose an alternate SLR limit based on the information and data submitted pursuant to this paragraph.

## **9.0 COMPLIANCE DETERMINATION PROCEDURES**

Immediately after ADM proposes its final VOC SLR limit for the Decatur East facility , ADM shall begin to account for solvent loss and quantity of oilseeds processed. The first compliance determination will be based on the first 12 operating months after the date on which the final VOC SLR limit is proposed. If a final VOC SLR limit is established pursuant to this Consent Decree for a plant that is different from the proposed limit, ADM shall begin to account for solvent loss and quantity of oilseed processed to comply with that limit on the date that it has been approved by EPA and IEPA. The first compliance determination will be based on the first 12 operating months after the date on which the final SLR limit is approved. "Operating month" is defined according to the definition provided in 40 C.F.R. Part 63, Subpart GGGG.

Within 90 days after proposal of the final VOC SLR limit, ADM shall apply to IEPA for the appropriate federally enforceable operating permits which incorporate this final VOC SLR limit.

Compliance with the final VOC SLR limits in this Consent Decree shall be determined in accordance with 40 C.F.R. Part 63, Subpart GGGG, with the following exceptions: (1) provisions pertaining to HAP content shall not apply; (2) monitoring and record keeping of solvent losses at each plant shall be conducted daily; (3) solvent losses and quantities of oilseed processed during startup and shutdown periods shall not be excluded in determining solvent losses; and (4) records shall be kept in the form of the following table that show total solvent losses, solvent losses during malfunction periods, adjusted solvent losses (i.e., total solvent losses minus malfunction losses) monthly and on a twelve-month rolling basis.

Solvent Loss Record for ADM Decatur East Plant

Date	Total Crush (tons)		Total Solvent Loss (gallons)		Malfunction Period Solvent Loss (gallons)		Adjusted Solvent Loss <sup>a</sup> (gallons)		SLR <sup>b</sup> (gal/ton)
	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	12-Month Rolling
Month -Year									

<sup>a</sup> - Adjusted Solvent Loss is equal to Total Solvent Loss minus Malfunction Period Loss.

<sup>b</sup> - Solvent Loss Ratio is equal to 12-month rolling Adjusted Solvent Loss divided by 12-Month Rolling Total Crush. Compliance determination for each plant is based on 12-Month Rolling SLR value compared to Final VOC SLR Limit.

Malfunctions. ADM may apply the provisions of 40 C.F.R. Part 63, Subpart GGGG pertaining to malfunction periods only when the conditions in both subparagraph (i) and (ii) are met:

(i) The malfunction results in a total plant shutdown. For purposes of this Consent Decree, a “total plant shutdown” means a shutdown of the solvent extraction system.

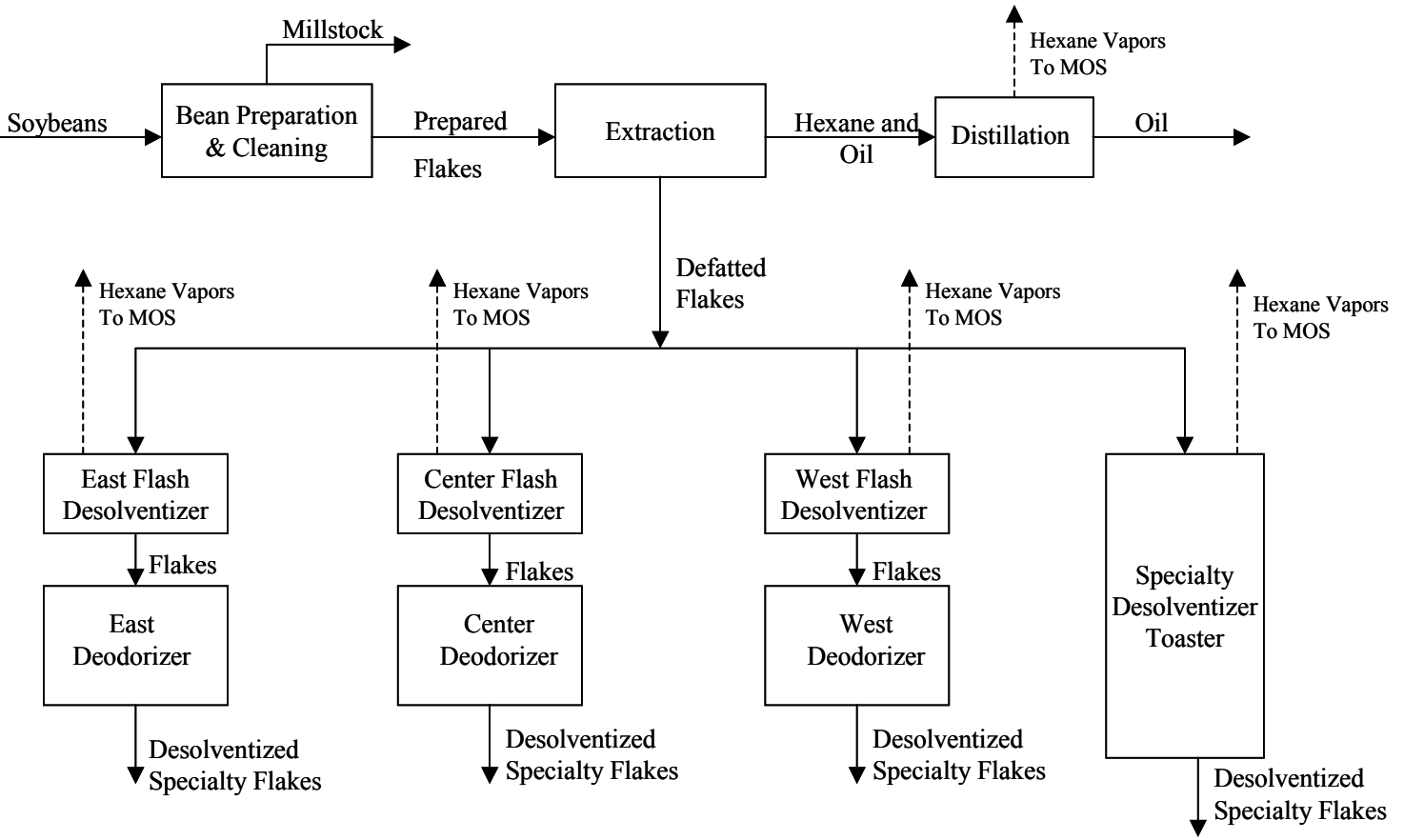
(ii) Cumulative solvent losses during malfunction periods at a plant do not exceed 4,000 gallons in a 12-month rolling period.

At all other times, ADM must include all solvent losses when determining compliance with its interim or final VOC SLR limits at each plant.

During a malfunction period, ADM shall comply with the startup, shutdown and malfunction (SSM) plan as required under Subpart GGGG for the plant. The solvent loss corresponding to a malfunction period will be calculated as the difference in the total solvent inventories for the day before the malfunction period began and the day the plant resumes normal operation.

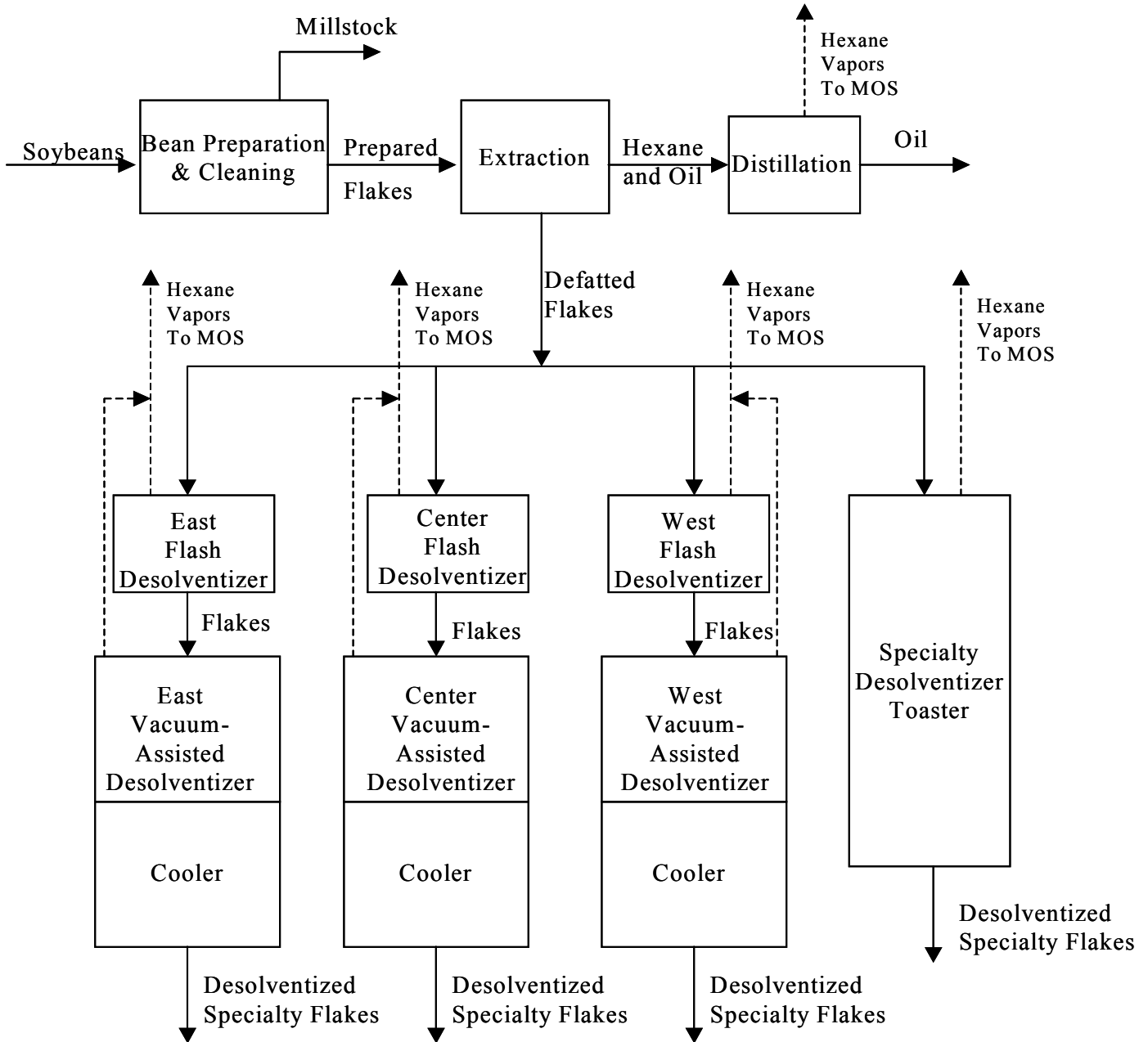
APPENDIX A: DECATUR EAST PROCESS FLOW DIAGRAM

**Decatur East Process Flow Diagram**



**APPENDIX B: DECATUR EAST PROCESS FLOW DIAGRAM WITH VADS TECHNOLOGY**

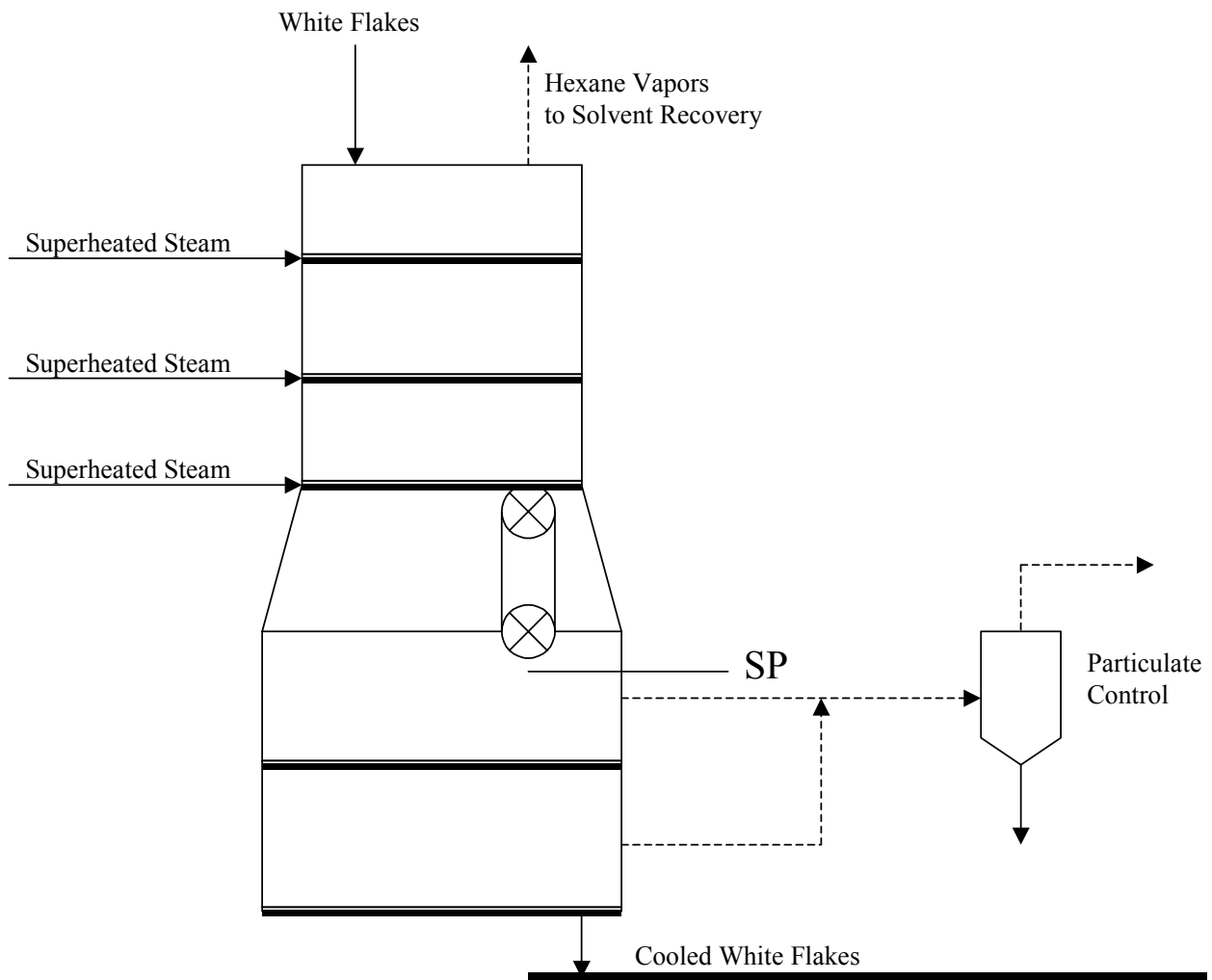
**Decatur East Process Flow Diagram w/VADS**



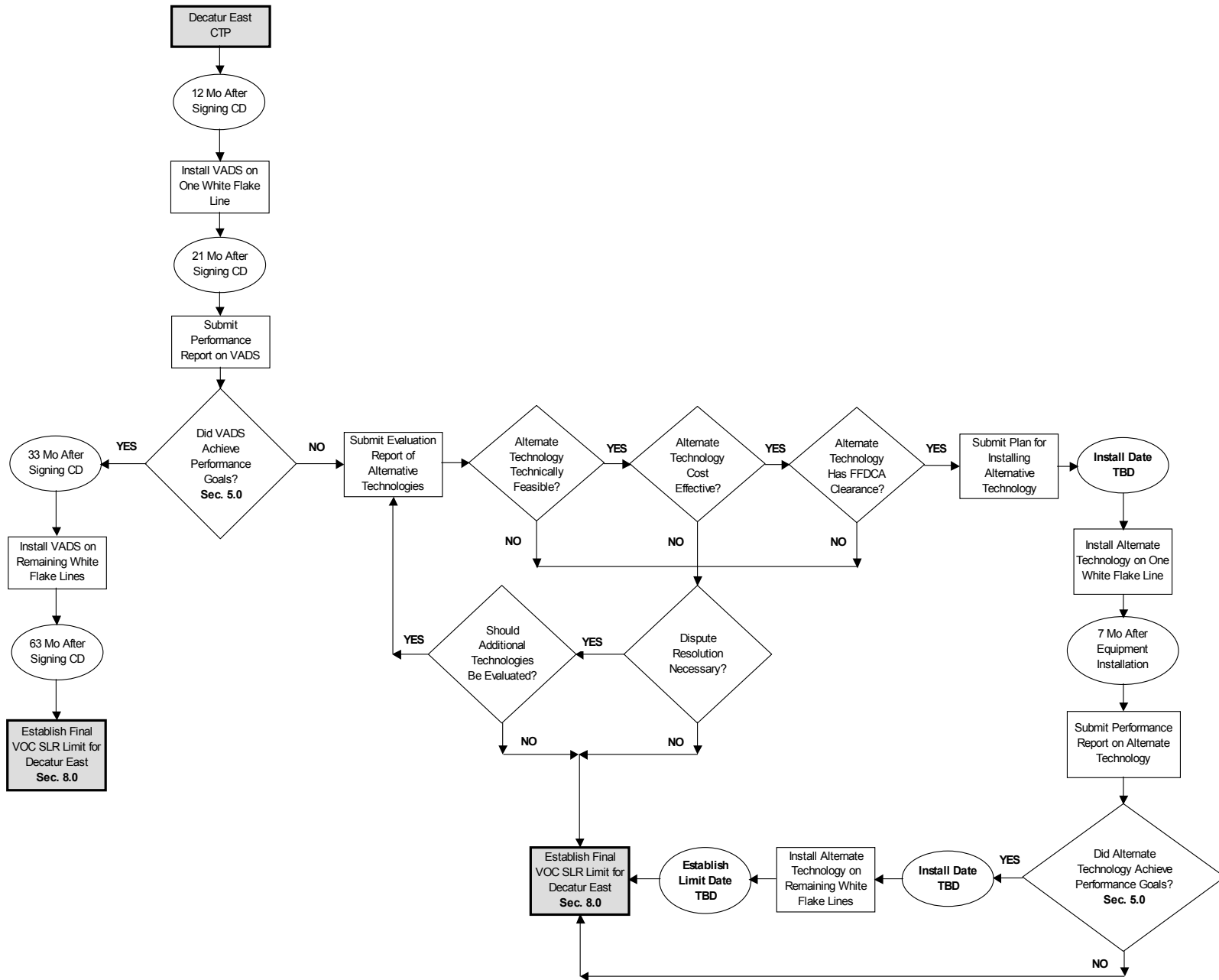


**APPENDIX C: VACUUM ASSISTED DESOLVENTIZING (VADS) TECHNOLOGY FLOW DIAGRAM AND RESIDUAL VOC SAMPLING PROTOCOL**

White flake samples will be pulled from point SP on the VADS process flow diagram. A sample collection coupling will be installed at this point. To take a sample, the lid of the coupling will be removed, a scoop will be inserted into the flow of flakes and the material will be immediately transferred to a 4 oz. plastic cup with a screw on lid. The sample container will be filled to the top to minimize headspace and the container top will be screwed on expeditiously. Samples will be taken daily. The sample will be sent to the ADM-Vitamin E lab for residual VOC analysis within 2-3 days.



# APPENDIX D: DECISION TREE



Attachment 11

# **VOC Control Technology Plan for ADM's Decatur West Conventional Soybean Plant**

March 14, 2003

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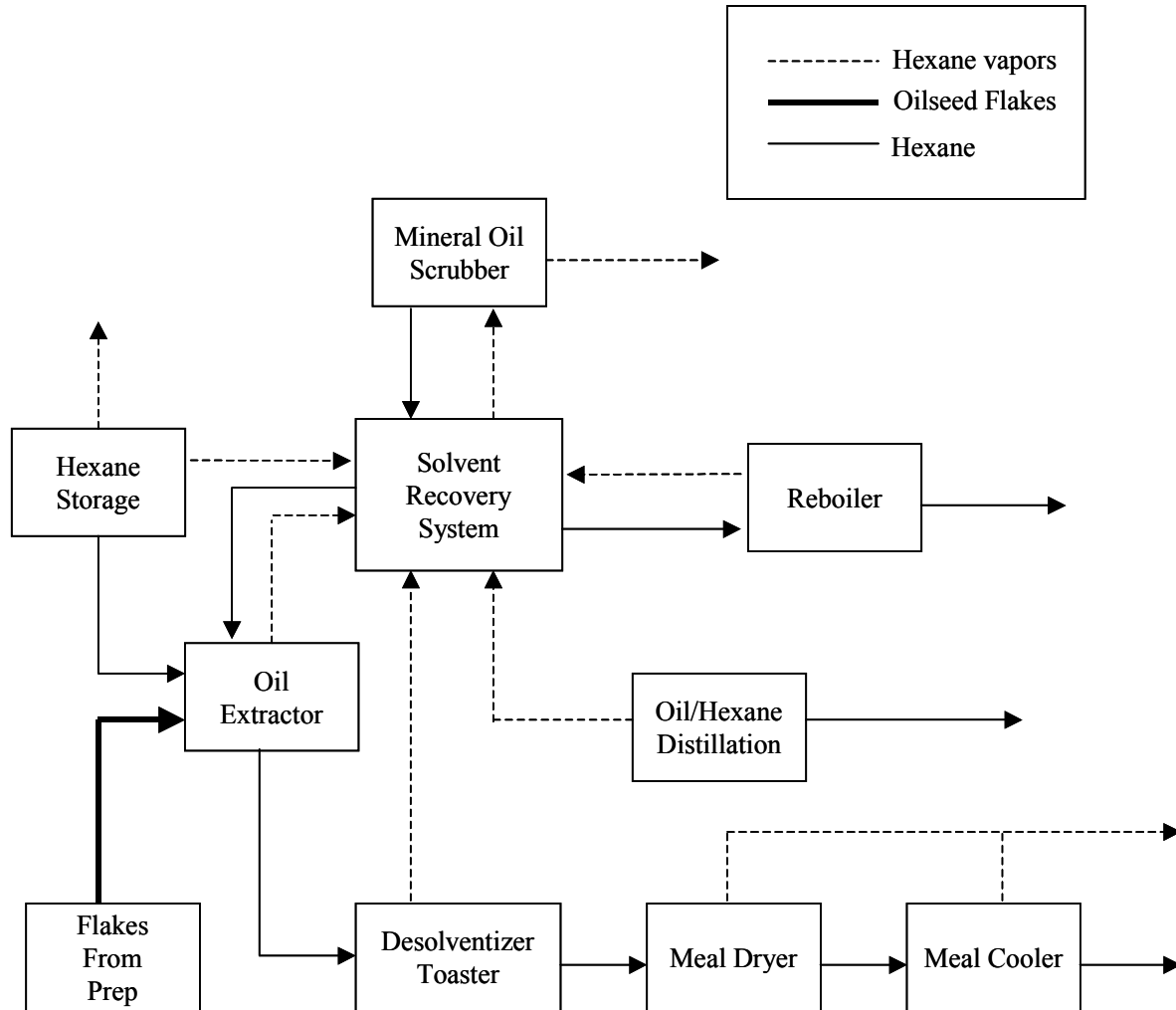
### SECTION

- 1.0 INTRODUCTION
- 2.0 PROCESS FLOW DIAGRAMS
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- 4.0 ENGINEERING DESIGN CRITERIA FOR PROCESS IMPROVEMENT EQUIPMENT
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## 2.0 PROCESS FLOW DIAGRAMS

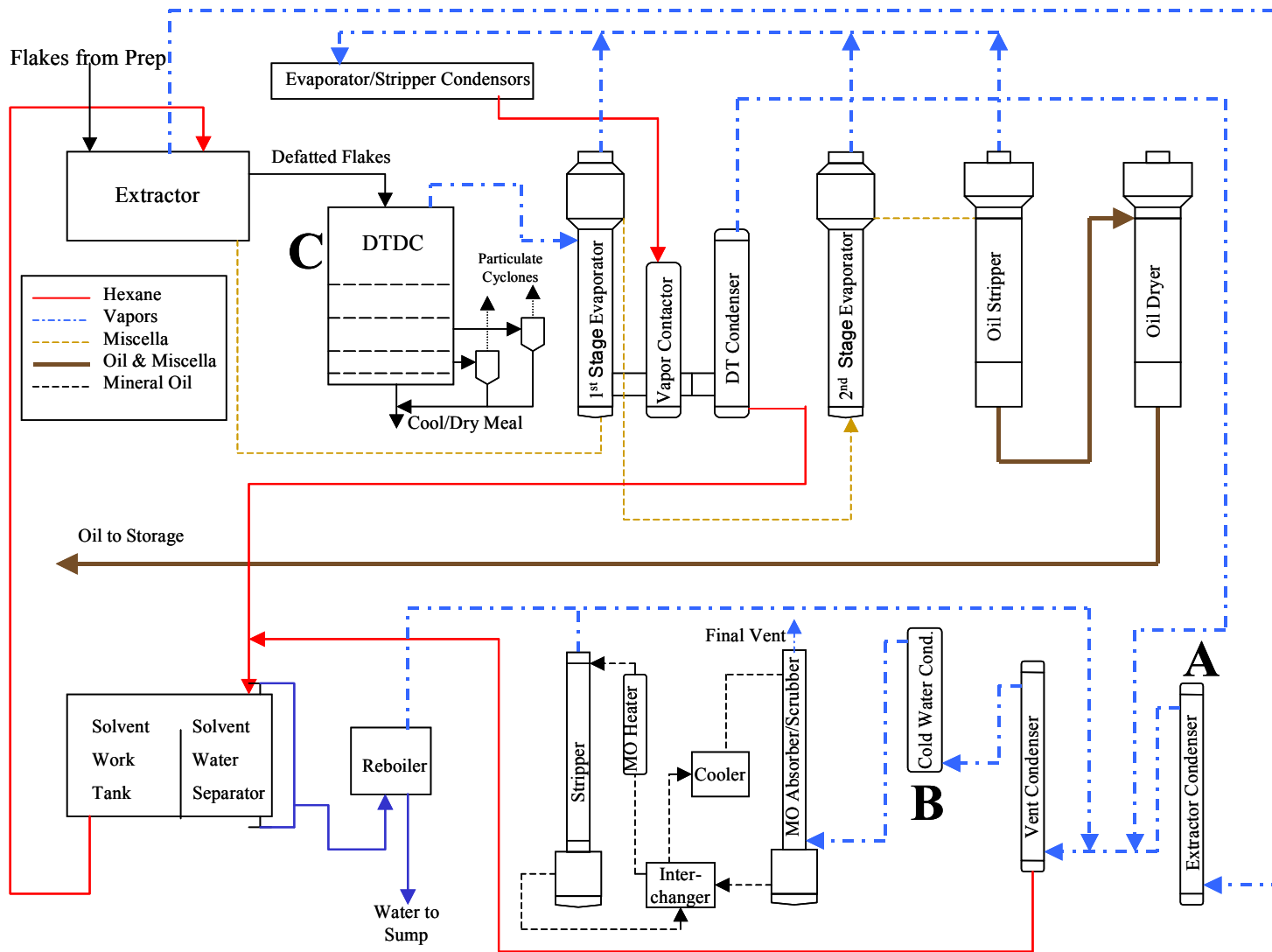
**Diagram 2.1 General Process**

The following process block diagram presents a general representation of the solvent extraction process at a typical ADM vegetable oil extraction facility.



**Diagram 2.2. Solvent Recovery Process**

On the following process flow diagram, Point B shows where the upgraded condenser will be installed and Point C shows where the DTDC upgrade occurred.



### 3.0 EMISSION UNITS REQUIRING PROCESS IMPROVEMENT EQUIPMENT

As part of this consent decree, ADM shall implement a series of projects to improve the operation of the solvent extraction system at its oilseed plants. For the Decatur West Plant, ADM has upgraded the DTDC and replaced several condensers in the solvent recovery system. Additionally, a cold-water condenser will be added between the vent condenser and the mineral oil absorber.

ADM has upgraded the existing DTDC by replacing two existing decks with three new decks and two additional pre-desolventizing trays. The 1<sup>st</sup> and 2<sup>nd</sup> effect condensers were replaced with new, larger condensers. The DT condenser, the stripper condenser and the final vent condenser were also replaced.

Operation of the DTDC modifications are expected to improve process performance by reducing VOC loading in the exhaust from the meal dryer and cooler vents and the crude meal exiting the process. Operation of the upgraded solvent recovery system and the new cold-water condenser are also expected to further improve process performance by reducing VOC loading on the current solvent recovery system. These process improvement projects will aid the Decatur West Plant in lowering overall VOC emissions.

The following process points have been designated as affected units in the consent decree and have requirements for the installation of process improvement equipment.

Plant	Location of Process Improvement Point	Description of Process Improvement Equipment
Decatur West Plant	Prior to mineral oil absorber (Point B in the process flow diagram)	Once-through cold-water condenser
	Existing DTDC (Point C in the process flow diagram)	Replaced two desolventizing decks and added one desolventizing deck. Added two pre-desolventizing trays
	Solvent recovery system	Replaced 1 <sup>st</sup> effect condenser, 2 <sup>nd</sup> effect condenser with larger condensers; replaced DT condenser, stripper condenser and final vent condenser.

#### 4.0 ENGINEERING DESIGN CRITERIA FOR PROCESS IMPROVEMENT EQUIPMENT

After identifying the affected units that require installation of process improvement equipment, ADM shall conduct a design and engineering review of each affected unit to size the process improvement equipment (i.e., condenser upgrade) as required by the consent decree. The criteria listed in this section will be the basis for sizing the required condenser upgrades.

Process Improvement Equipment Description	Design Criteria *
Install a once-through cold-water condenser	minimum of 94 ft <sup>2</sup> surface area
Replaced two decks and added one deck to the DTDC	220 inch diameter decks (fixed by size of the DTDC)
Added two pre-desolventizing trays	180 inch diameter trays (fixed by size of the DTDC)
Replaced: 1 <sup>st</sup> and 2 <sup>nd</sup> effect condensers with larger units DT condenser Stripper condenser Vent condenser	minimum 2.6 ft <sup>2</sup> /ton, 1 <sup>st</sup> and 2 <sup>nd</sup> effect tied together minimum 1.2 ft <sup>2</sup> /ton minimum 1.0 ft <sup>2</sup> /ton minimum 0.7 ft <sup>2</sup> /ton

\* These design criteria are specific to the Decatur West Plant. At any other facility, these criteria could change depending on the size of the solvent recovery equipment.

#### 5.0 FINAL VOC EMISSION LIMIT

ADM shall comply with the emission limits established under the Consent Decree and shall incorporate the Final VOC Solvent Loss Ratio (SLR) Limit into a federally enforceable operating permit for the Decatur West Plant.

##### Final Permit Limit

(a) By no later than Dec. 31, 2007, ADM shall propose in writing to the Plaintiffs a final VOC SLR limit for the Decatur West Plant that satisfies the requirements of this Paragraph.

(b) The capacity-weighted average of the final VOC SLR limits for Decatur West and all



of ADM's conventional soybean plants shall not exceed the following Category VOC SLR limit:

0.175 gal/ton for conventional soybean plants

ADM will use the following equation to calculate the capacity-weighted average of the final VOC SLR limits for all of its conventional soybean plants:

$$\text{Conventional Soybean} = \frac{\sum (\text{Seed}_i * \text{SLR}_i)}{\sum (\text{Seed}_i)} \leq 0.175 \text{ gal/ton}$$

Where:  $\text{Seed}_i$  = Crush capacity of oilseed plant  $i$  (tons of crush per day); and  
 $\text{SLR}_i$  = Final VOC SLR limit for oilseed plant  $i$  (gallons of solvent lost per day).

(c) The capacity-weighted average of the final VOC SLR limits for ADM's conventional soybean plants shall be based on the design capacity for each plant that has been approved by the Plaintiffs under Paragraph 68 of the Consent Decree. For purposes of this Consent Decree, design capacity is the plant's "maximum permitted crush capacity" that a plant is allowed to process in a given time period under its operating permit, or, if no limit is included in the operating permit, the plant's maximum physical design capacity. This number is expressed as "tons of crush per day."

## **6.0 INSTALLATION SCHEDULE FOR PROCESS IMPROVEMENT EQUIPMENT**

ADM shall conduct the following emission reduction projects at its Decatur West conventional soybean plant:

(a) By no later than 12 months following lodging of this Consent Decree, ADM shall upgrade the desolventizer toaster/dryer cooler ("DTDC").

(b) ADM will install a new "once-through cold water" condenser following the vent condenser pursuant to the schedule in Paragraph 60 of the Consent Decree.

## **7.0 RECORDKEEPING AND REPORTING REQUIREMENTS FOR FINAL VOC EMISSION LIMIT**

To demonstrate compliance with the final VOC SLR limit at the Decatur West Plant, ADM shall

- (a) maintain the records required by 40 C.F.R. Part 63, Subpart GGGG on solvent loss and quantity of oilseed processed; and
- (b) maintain the records required by 40 C.F.R. Part 63, Subpart GGGG, for any malfunction period as defined in Section 8.0 below.

DTDC Project Report. By no later than 45 days after the lodging of this Consent Decree, ADM shall submit a report to the Plaintiffs that specifies the DTDC improvement project details and the completion date to demonstrate that the deadline in Paragraph (a) of Section 6.0 has been met.

Condenser Project Reports. In the semiannual reports due on July 30, of 2004, 2005 and 2006, ADM shall submit reports to Plaintiffs identifying the plants at which upgraded condenser systems have been installed since the last reporting period and ADM’s tentative projections for the remaining installations, to demonstrate that the deadlines in Paragraph (b) of Section 6.0 have been and will be met. For any plant not operating on April 1, 2006, the report shall be submitted 30 days after the installation deadline under Paragraph (b) of Section 6.0.

**8.0 COMPLIANCE DETERMINATION PROCEDURES**

Solvent Loss Ratio (SLR) Limits. Compliance with the interim and final VOC SLR limits in this Consent Decree shall be determined in accordance with 40 C.F.R. Part 63, Subpart GGGG, with the following exceptions: (1) provisions pertaining to HAP content shall not apply; (2) monitoring and recordkeeping of solvent losses at each plant shall be conducted daily; (3) solvent losses and quantities of oilseed processed during startup and shutdown periods shall not be excluded in determining solvent losses; and (4) records shall be kept in the form of the following table that show total solvent losses, solvent losses during malfunction periods, adjusted solvent losses (i.e., total solvent losses minus malfunction losses) monthly and on a twelve-month rolling basis.

Solvent Loss Record for ADM Decatur West Soybean Plant

Date	Total Crush (tons)		Total Solvent Loss (gallons)		Malfunction Period Solvent Loss (gallons)		Adjusted Solvent Loss <sup>a</sup> (gallons)		SLR <sup>b</sup> (gal/ ton)
	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	12-Month Rolling
Month -Year									

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<sup>a</sup> - Adjusted Solvent Loss is equal to Total Solvent Loss minus Malfunction Period Loss.

<sup>b</sup> - Solvent Loss Ratio is equal to 12-month rolling Adjusted Solvent Loss divided by 12-Month Rolling Total Crush. Compliance determination for each plant is based on 12-Month Rolling SLR value compared to Final VOC SLR Limit.

Malfunctions. ADM may apply the provisions of 40 C.F.R. Part 63, Subpart GGGG pertaining to malfunction periods only when the conditions in both subparagraph (i) and (ii) are met:

- (i) The malfunction results in a total plant shutdown. For purposes of this Consent Decree, a “total plant shutdown” means a shutdown of the solvent extraction system.
- (ii) Cumulative solvent losses during malfunction periods at a plant do not exceed 4,000 gallons in a 12-month rolling period.

At all other times, ADM must include all solvent losses when determining compliance with its interim or final VOC SLR limits at each plant.

During a malfunction period, ADM shall comply with the startup, shutdown and malfunction (SSM) plan as required under Subpart GGGG for the plant. The solvent loss corresponding to a malfunction period will be calculated as the difference in the total solvent inventories for the day before the malfunction period began and the day the plant resumes normal operation.

**ATTACHMENT 12**

<b>Plant</b>	<b>Unit</b>	<b>Baseline VOC Emissions (tpy)<sup>1</sup></b>	<b>Required Efficiency (%)<sup>2</sup></b>	<b>Estimated Emission Reductions (tpy)<sup>3,5</sup></b>	<b>Source Reduction Baseline and/or Inlet Efficiency Measurement Location<sup>4</sup></b>	<b>Basis for Baseline Emissions Estimate</b>
Decatur	Gluten Feed Fiber Dryer No. 1	275	95%	261	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 2	280	95%	266	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 3	280	95%	266	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 4	280	95%	266	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 5	351	95%	334	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 6	824	95%	783	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Feed Fiber Dryer No. 7	906	95%	860	Inlet to RTO	Emission Factor
Decatur	Germ Dryers + Millhouse Scrubber	683	95%	649	Outlet of existing control equipment	Reference Method Test
Decatur	Non-dedicated Ethanol Loadout	428	95%	406	Inlet to Flare	AP-42
Decatur	Ethanol Fermenters	81	95%	77	Discharge from process equipment.	Screening Test
Decatur	Gluten Meal Dryer No. 1	142	95%	135	Outlet of existing control equipment	Reference Method Test
Decatur	Gluten Meal Dryer No. 2	142	95%	135	Outlet of existing control equipment	Reference Method Test
Decatur	No.1 Carbon Furnace	447	95%	425	Outlet of existing control equipment	Reference Method Test
Decatur	No.2 Carbon Furnace	447	95%	425	Outlet of existing control equipment	Reference Method Test
Decatur	No.3 Carbon Furnace	894	95%	850	Outlet of existing control equipment	Reference Method Test
Decatur	Yeast Propagator Vent	267	95%	254	Discharge from process equipment.	Screening Test
Decatur	Stillage MR Vents	847	95%	804	Discharge from process equipment.	Emission Factor
Cedar Rapids	Carbon Furnace No. 1	335	95%	318	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Carbon Furnace No. 2	335	95%	318	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Carbon Furnace No. 3	335	95%	318	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Non-dedicated Ethanol Loadout	116	95%	110	Discharge from process equipment.	AP-42
Cedar Rapids	Ethanol Fermenters	60	95%	57	Discharge from process equipment.	Reference Method Test
Cedar Rapids	Gluten Feed Dryer No. 1	135	95%	128	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Feed Dryer No. 2	135	95%	128	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Feed Dryer No. 3	332	95%	315	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Feed Dryer No. 4	603	95%	573	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Feed Dryer No. 5	603	95%	573	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Meal Dryer 1	137	95%	130	Outlet of existing control equipment	Emission Factor
Cedar Rapids	Gluten Meal Dryer 2	203	95%	193	Outlet of existing control equipment	Emission Factor
Clinton	Stearns Feed Dryer No. 1	428	95%	407	Outlet of existing control equipment	Emission Factor
Clinton	Gluten Intensa Dryer No. 1	237	95%	225	Outlet of existing control equipment	Emission Factor
Clinton	Gluten Intensa Dryer No. 5	355	95%	337	Outlet of existing control equipment	Emission Factor
Clinton	Gluten Intensa Dryer No. 6	340	95%	323	Outlet of existing control equipment	Emission Factor
Clinton	Stearns Feed Dryer No. 2	212	95%	201	Outlet of existing control equipment	Emission Factor
Clinton	Stearns Feed Dryer No. 3	212	95%	201	Outlet of existing control equipment	Emission Factor
Clinton	Carbon Furnace No. 1	391	95%	371	Outlet of existing control equipment	Emission Factor
Clinton	Carbon Furnace No. 2	391	95%	371	Outlet of existing control equipment	Emission Factor
Clinton	Non-dedicated Ethanol Loadout	109	95%	104	Inlet to Flare	AP-42
Clinton	Ethanol Fermenters	742	95%	705	Discharge from process equipment.	Screening Test
Clinton	Yeast Propagator Vent	119	95%	113	Discharge from process equipment.	Emission Factor
Clinton	Stillage MR Vents	423	95%	402	Discharge from process equipment.	Emission Factor
Clinton	Millhouse Scrubber	745	95%	708	Outlet of existing control equipment	Screening Test
Columbus	Millhouse Scrubber	83	95%	79	Inlet to existing millhouse scrubber	Reference Method Test
Columbus	Non-dedicated Ethanol Loadout	54	95%	52	Inlet to Flare	AP-42

**ATTACHMENT 12**

Plant	Unit	Baseline VOC Emissions (tpy) <sup>1</sup>	Required Efficiency (%) <sup>2</sup>	Estimated Emission Reductions (tpy) <sup>3,5</sup>	Source Reduction Baseline and/or Inlet Efficiency Measurement Location <sup>4</sup>	Basis for Baseline Emissions Estimate
Columbus	Ethanol Fermenters	3	95%	3	Discharge from process equipment.	Screening Test
Columbus	Germ Dryers 1-3	46	95%	44	Discharge from process equipment.	Reference Method Test
Columbus	Stillage MR Vents	423	95%	402	Discharge from process equipment.	Screening Test
Columbus	VB Scrubber (distillation) Vent	65	95%	62	Discharge from process equipment.	Screening Test
Marshall	Carbon Furnace #1	172	95%	164	Discharge from process equipment.	Reference Method Test
Marshall	Non-dedicated Ethanol Loadout	134	95%	127	Inlet to Flare	AP-42
Marshall	Feedhouse + MR Vent	51	95%	48	Inlet to existing feedhouse scrubber	Reference Method Test
Marshall	Ethanol Fermenters	4	95%	4	Discharge from process equipment.	Screening Test
Marshall	Gluten Flash Dryer	30	95%	29	Discharge from process equipment.	Screening Test
Marshall	Millhouse Vent	57	95%	54	Inlet to existing millhouse scrubber	Reference Method Test
Peoria	Non-dedicated Ethanol Loadout	42	95%	40	Inlet to Flare	AP-42
Peoria	Direct-Fired Feed Dryers (RTO bypass)	461	95%	438	Inlet to RTO	Reference Method Test
Peoria	Yeast Propagator Vent	119	95%	113	Discharge from process equipment.	Emission Factor
Peoria	Ethanol Fermenters	32	95%	30	Discharge from process equipment.	Reference Method Test
Walhalla	DDGS Dryer	306	95%	290	Outlet of existing control equipment	Emission Factor
Walhalla	Yeast Propagator Vent	59	95%	56	Discharge from process equipment.	Emission Factor
Walhalla	Ethanol Fermenters Vent	18	95%	17	Discharge from process equipment.	Screening Test
<b>Notes:</b>						
1 - <b>Baseline VOC Emissions (tpy)</b> represent the best estimate of the emissions from the listed sources absent the Consent Decree required emission reduction projects.						
2 - <b>Required Efficiency (%)</b> is the Consent Decree required percent reduction in emissions as applied to emissions at the Source Reduction Baseline / Inlet Efficiency Measurement Location.						
3 - <b>Estimated Emission Reductions (tpy)</b> are provided only for purposes of determining compliance with the schedule provisions of Paragraph 28 of the Consent Decree. Actual reductions may be more or less than this value and will be characterized at the time the emissions reduction project is completed. An emissions reduction project that meets the alternative ppm limit is deemed to have achieved the reductions listed here.						
4 - <b>Source Reduction Baseline / Inlet Efficiency Measurement Location</b> is the point in the process where uncontrolled emissions are to be measured for purposes of determining whether the Consent Decree emission reduction requirements have been met.						

## ATTACHMENT 12

Plant	Unit	Baseline NOx Emissions (tpy)	Project Description	Project Reduction Efficiency (%)	Estimated Emission Reductions (tpy) <sup>(1)</sup>	Basis for Baseline Emissions Estimate
Cedar Rapids	Package Boiler No. 3	27.6	Shutdown	100%	27.6	AP-42 & Fuel Use Data
Cedar Rapids	Package Boiler No. 4	25.0	Shutdown	100%	25.0	AP-42 & Fuel Use Data
Cedar Rapids	Package Boiler No. 5	19.8	Shutdown	100%	19.8	AP-42 & Fuel Use Data
Cedar Rapids	Package Boiler No. 6	27.1	Shutdown	100%	27.1	AP-42 & Fuel Use Data
Cedar Rapids	Package Boiler No. 7	7.6	Shutdown	100%	7.6	AP-42 & Fuel Use Data
Clinton	Boiler No. 6	1415.1	SNCR <sup>(2)</sup>	70%	990.6	Stack Test & Fuel Use Data
Clinton	Boiler No. 7	1820.3	SNCR <sup>(2)</sup>	70%	1274.2	Stack Test & Fuel Use Data
Clinton	Boiler No. 1	108.8	LNB <sup>(3)</sup>	80%	86.5	Stack Test & Fuel Use Data
Clinton	Boiler No. 2	97.7	LNB <sup>(3)</sup>	80%	77.7	Stack Test & Fuel Use Data
Columbus	Boiler No. 1	17.5	LNB <sup>(3)</sup>	50%	8.8	CEMS

(1) - Reductions listed here are those that are deemed to be required by the Consent Decree if a unit is shutdown.

(2) - 70% efficiency is used for purposes of determining Consent Decree required emissions reductions associated with a unit shutdown, but shutdown of either Unit 6 or 7 is sufficient to meet the Consent Decree NOx reduction requirements for both units.

(3) - LNB design target emissions level of 0.06 lb NOx/MMBtu forms the basis for the estimated efficiency

ATTACHMENT 13 TO CONSENT DECREE

**Solvent Loss Record for ADM Oilseed Plant X**

Date	Total Crush (tons)		Total Solvent Loss (gallons)		Malfunction Period Solvent Loss (gallons)		Adjusted Solvent Loss <sup>a</sup> (gallons)		SLR <sup>b</sup> (gal/ton)
	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	Monthly	12-Month Rolling	12-Month Rolling
Month- Year									

<sup>a</sup> - Adjusted Solvent Loss is equal to Total Solvent Loss minus Malfunction Period Loss.

<sup>b</sup> - Solvent Loss Ratio is equal to 12-month rolling Adjusted Solvent Loss divided by 12-Month Rolling Total Crush. Compliance determination for each plant is based on 12-Month Rolling SLR value compared to Final VOC SLR Limit.