

ATTACHMENT E

Control Technology Plan for Bunge East's Decatur, Indiana Conventional Soybean Plant

May, 2006

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1.0 Introduction

This Control Technology Plan (CTP) is Attachment E to a Consent Decree signed by Bunge North America (East), L.L.C. (Bunge East), the United States, and the State of Indiana, among others. This CTP describes the emission reduction program that Bunge East shall implement at its conventional soybean extraction plant which it owns and operates in Decatur, Indiana (Decatur, Indiana Plant). This CTP contains:

- (a) Identification of all units to be controlled;
- (b) Engineering design criteria for all proposed controls;
- (c) Applicable emission limits for VOC and PM/PM10;
- (d) Monitoring parameters for all control equipment;
- (e) A schedule for installation;
- (f) Identification of units to be emission tested and definition of the test methods that will be used; and
- (g) A procedure for setting emission limits following start-up of emissions control equipment.

2.0 Program Summary

Bunge East shall implement a program with the goal of achieving a reduction of volatile organic compound (VOC) emissions from the soybean solvent extraction plant and particulate matter (PM/PM10) emissions from the coal boilers at the Decatur, Indiana Plant.

The VOC emission reduction component of this program consists of optimization of the existing solvent recovery system at its soybean processing plant. The optimization will aid the Decatur, Indiana Plant in lowering overall VOC emissions. The VOC emission limit will be established pursuant to Section 10.0 of this CTP.

The PM/PM10 emission reduction component of this program consists of Bunge East installing at least one bag filter on the existing coal boilers at its Decatur, Indiana Soybean Plant. If the program reasonably meets the design criteria in Section 5.0 of this CTP, Bunge East will operate the bag filter(s) according to the schedule in Section 8.0 of this CTP. The emission reduction benefits from this PM/PM10 project will be addressed in the final PM/PM10 emission limit for the coal boilers, which will be established pursuant to Section 7.0 of this CTP.

3.0 Process Flow Diagrams

This section includes the following flow diagrams:

- Diagram 3.1 – General Process
- Diagram 3.2 – Process Flow for Bag Filter

Diagram 3.1 General Process

The following process block diagram presents a general representation of the solvent extraction process at a typical Bunge East vegetable oil solvent extraction plant.

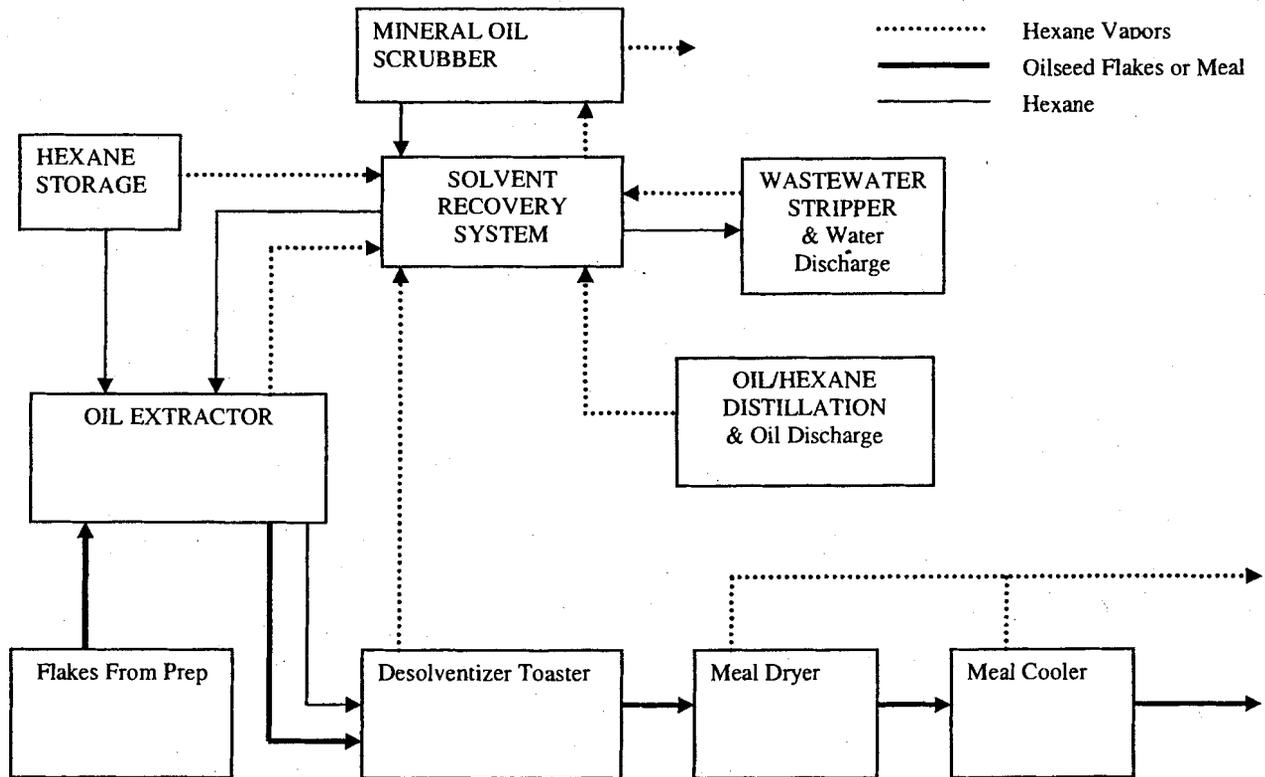
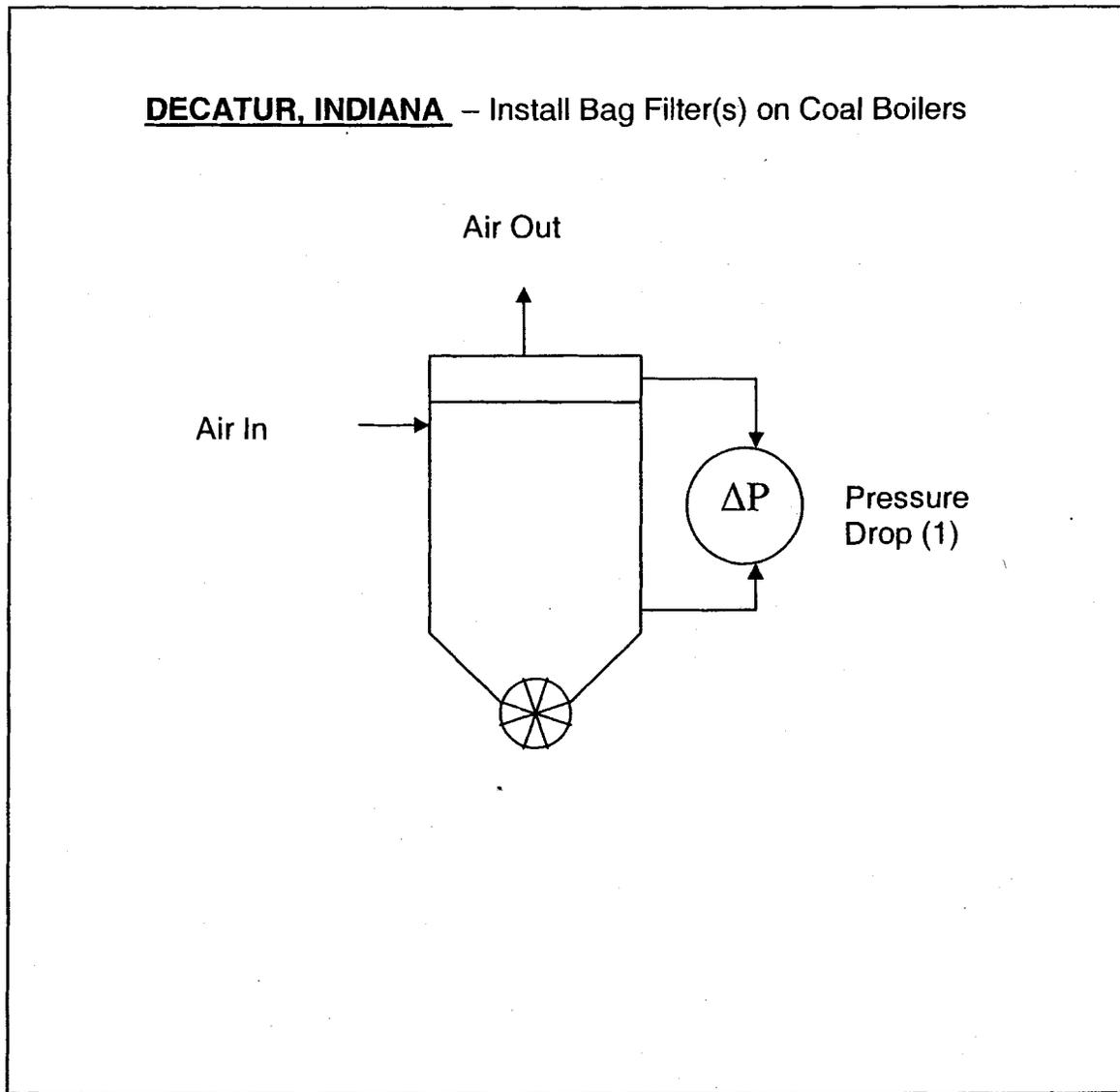


Diagram 3.2. Process Flow Diagram for Bag Filter Project

The following flow diagram presents the particulate matter (PM) control technology.



Install Bag Filter(s) on Coal Boilers to control particulate matter (PM/PM10)

The Pressure Drop (1) of the Bag Filter(s) will be maintained within the range of 0.5 inches H₂O to 8 inches H₂O, under normal operating conditions.

4.0 Emission Units Requiring Pollution Control Equipment

The following emission unit and control equipment have been designated as affected units in the Consent Decree and have emission limits requiring either pollution control technology or alternative projects designed to reduce emissions as specified in this CTP. Changes to the requirements listed in the following table may be considered non-material modifications under Paragraph 5.b. of the Consent Decree, provided Bunge East (1) achieves the emission limits specified in this CTP and the Consent Decree for the Decatur, Indiana Plant, and (2) obtains prior written approval of the change(s) from EPA and the Indiana Department of Environmental Management (IDEM) as provided in Paragraph 5.b. of the Consent Decree.

Emission Unit Description	Control Equipment/Optimization Description
Coal Boilers	Installation of Bag Filter(s) (PM/PM10)

5.0 Engineering Design Criteria for Pollution Control Equipment

Bunge East shall report any deviation from the design criteria listed here in the semi-annual reports required by Paragraph 47 of the Consent Decree and as required under other state and federal rules. 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 may be considered non-material modifications under Paragraph 5.b. of the Consent Decree, provided Bunge East (1) achieves the emission limits specified in this CTP and the Consent Decree for the Decatur, Indiana Plant, and (2) obtains prior written approval of the change(s) from EPA and IDEM as provided in Paragraph 5.b. of the Consent Decree.

Emission Unit Description	Control Equipment/ Optimization Description	Design Criteria Targets
Coal Boilers	Installation of Bag Filter(s) (PM/PM10)	0.07 lb (PM/PM10)/MMBtu

As shown in the following table, the PM/PM10 emissions for the coal boilers that will be reduced with the installation of the Bag Filter(s) are approximately 255 TPY PM and 167 TPY PM10.

**Decatur, IN
Particulate Matter (PM) Emissions Reductions**

Basis	PM	PM10	lb PM/MMBtu ⁽¹⁾	Coal Use (tons)	Btu/lb
2002	263	171	0.589	33,020	13,516
2003	284	184	0.589	35,845	13,437
Average	273.5	177.5			
Future Bag Filter ⁽³⁾	18	11	0.0305 ⁽²⁾	44,000	13,450
Emissions decrease	255	167			

⁽¹⁾ Based on AP-42 Table 1.1-4, spreader stoker with multiclone control with no reinjection, ratio of PM10/PM is 7.8/12 = 0.65; and AP-42 Table 1.1-9 for Bag Filter control, ratio of PM10/PM is 0.072/0.12 = 0.6.

⁽²⁾ Value is the average of the Boiler MACT tests conducted at the Delphos, Marion, Cairo, and Danville plants in 2004.

⁽³⁾ Based on 2005 estimated coal budget tons with 2007 MACT Bag Filter.

6.0 Monitoring Parameters for Pollution Control Equipment

Beginning no more than 30 days following startup of the control equipment described below or thirty days after lodging of the Consent Decree, whichever is later, Bunge East shall monitor the parameters listed below. Changes to the requirements listed in the following table may be considered non-material modifications under Paragraph 5.b. of the Consent Decree, provided Bunge East (1) achieves the emission limits specified in this CTP and the Consent Decree for the Decatur, Indiana Plant, and (2) obtains prior written approval of the change(s) from EPA and IDEM as provided in Paragraph 5.b. of the Consent Decree.

All monitoring data collected shall be recorded and maintained on-site. Bunge East shall report any deviation from monitoring frequency, record keeping and/or range in the semi-annual reports required by Paragraph 47 of the Consent Decree and as required under other state and federal rules.

Emission Unit Description	Control Equipment / Optimization Description	Parameter Monitored	Compliance Operating Range/Limit	Monitoring Frequency
Coal Boilers	Installation of Bag Filter(s) (PM/PM10)	Opacity or Bag Filter Leak Detector	< 20% Opacity or No Bag Leak	Continuous Continuous
		Pressure Drop	0.5 inches to 8 inches H ₂ O, under normal operating conditions	Once per operational day

7.0 Emission Limits

The table below lists the emissions limits that Bunge East shall meet pursuant to this CTP and the Consent Decree.

Emission Unit Description	Control Equipment/Optimization Description	Pollutant	Emission Limit(s)
Coal Boilers	Installation of Bag Filter(s)	PM/PM10	0.07 lb (PM/PM10)/MMBtu
Conventional Soybean Extraction System	N/A	VOC	Solvent Loss Ratio ⁽¹⁾

⁽¹⁾ The procedure for establishing this limit is outlined in Section 10.0 of this CTP.

Any deviation from emission limits shall be reported in the semi-annual reports required by Paragraph 47 of the Consent Decree and as required under other state and federal rules.

8.0 Schedules for Emission Reduction Projects

Bunge East shall report any deviation from the applicable schedules in the semi-annual reports required by Paragraph 47 of the Consent Decree and as required under other state and federal rules.

The following schedule implements Paragraph 23 of the Consent Decree:

Emission Reduction Project	Schedule
Installation of Bag Filter(s) on Coal Boilers (PM/PM10)	December 31, 2006

9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

By no later than 180 days after installation of the Bag Filter(s) required by Sections 4.0 and 5.0 of this CTP, Bunge East shall conduct the following performance testing. Testing for compliance or demonstration of emission limits shall be conducted in accordance with a protocol approved by EPA and IDEM. During source testing, Bunge East shall monitor, at a minimum, the operating parameters specified in Section 6.0 of this CTP.

Emission Unit/ Pollution Control Device	Pollutant(s) Tested	Test Method
Bag Filter(s) for Coal Boilers	PM/PM10 (outlet)	As applicable, Methods 1, 2, 3A or B, 4, and 5/202.

No later than 60 days after the completion of the source testing, Bunge East shall submit an emissions report to IDEM.

Bunge East shall comply with the emission limit established in Section 7.0 of the CTP no later than 180 days after installation of the Bag Filter(s).

10.0 Procedures for Optimization of Control Equipment and Setting Emission Limits

Interim VOC SLR Emissions Limit

In accordance with Attachment A to the Consent Decree, Bunge East shall begin to account for solvent loss and quantity of oilseeds processed to comply with a 0.15 gal/ton VOC solvent loss ratio (SLR) at the Decatur, Indiana Plant. The first compliance determination with this interim limit will be based on the first 12 operating months of data collected after the date on which Bunge East begins to account for solvent loss under this paragraph.

Final VOC SLR Emissions Limit

In accordance with Attachment A to the Consent Decree, Bunge East shall comply with a final VOC SLR limit for the Decatur, Indiana Plant established according to the requirements of the VOC CTP for Defendants' Soybean Extraction Plants and Paragraphs 31 through 36 of the Consent Decree.