E-FILED
Tuesday, 16 January, 2007 02:48:14 PM
Clerk, U.S. District Court, ILCD

ATTACHMENT I

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

May, 2006

CONTENTS

SECTION

1.0 Introduction

This Control Technology Plan (CTP) is Attachment I 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 Morristown, Indiana (Morristown, 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, SO_2, and NOx;

(d) Monitoring parameters for all control equipment;

(e) Emission limits and required reductions for each pollutant as appropriate;

(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, sulfur dioxide (SO_2), and nitrogen oxides (NOx) from the soybean solvent extraction plant and associated boilers at the Morristown, Indiana Plant.

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

The NOx emission reduction component of this program consists of Bunge East installing one Low NOx Burner with flue gas recirculation on its primary natural gas Boiler (No. 2) at its Morristown, Indiana Soybean Plant. If the program reasonably meets the design criteria in Section 5.0 of this CTP, Bunge East will operate the Low NOx burner according to the schedule in Section 8.0 of this CTP. The emission reduction benefits from this NOx projects will be addressed in the final NOx emission limit for the boiler, which will be established pursuant to Section 7.0 of this CTP.

Bunge East has two boilers at the Morristown, Indiana Facility. Boiler No. 2 serves as the primary boiler for the Morristown, Indiana Facility and typically burns natural gas. Boiler No. 1 will serve as a backup to Boiler No. 2. Boiler No. 1 and Boiler No. 2 have the capability to burn #2 fuel oil as an alternative fuel. The SO_2 emission reduction component of this program consists of Bunge East switching to a lower sulfur #2 fuel oil with a 0.05% sulfur content for the times when Boiler No. 1 and/or Boiler No. 2 utilize their capability to burn #2 fuel oil.

3.0 Process Flow Diagrams

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.

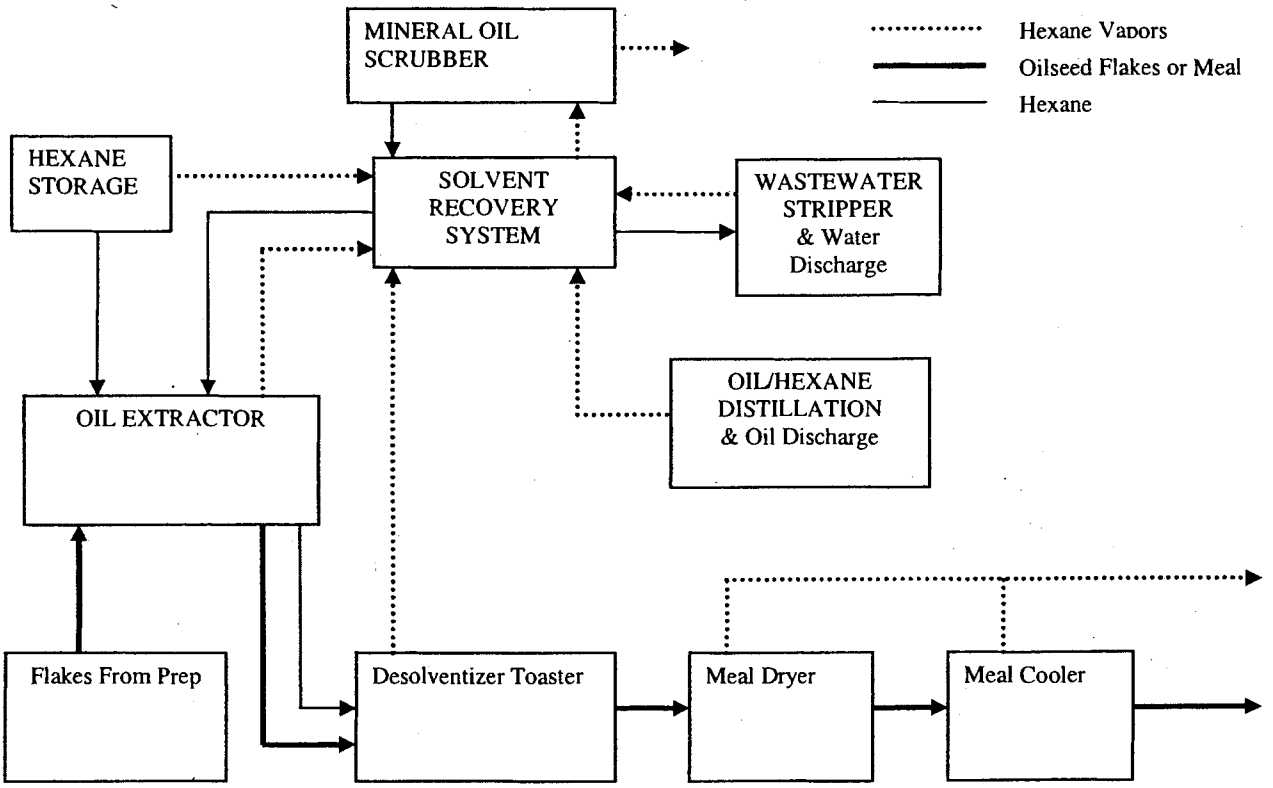
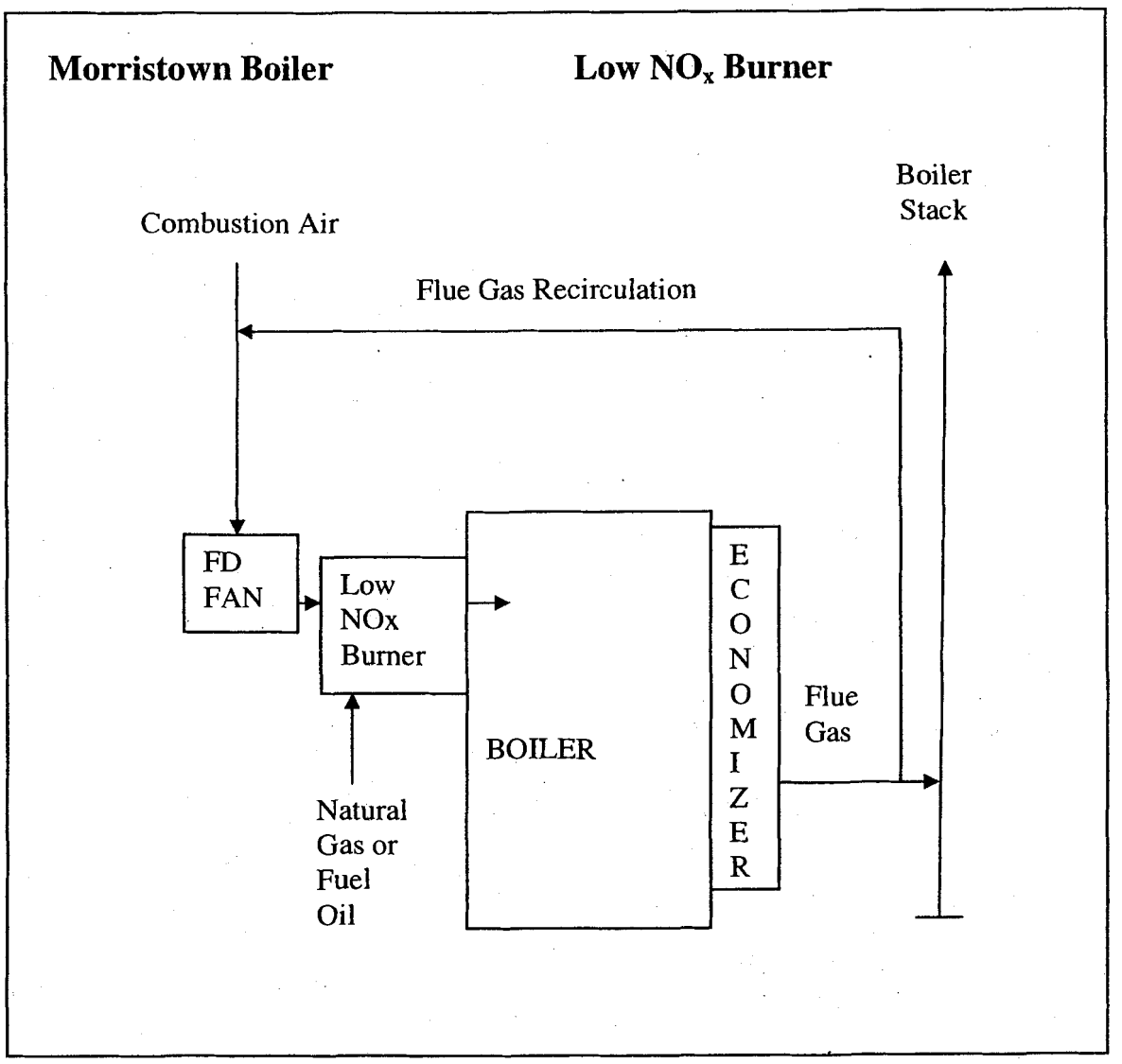


Diagram 3.2. Process Flow Diagram for Boiler and Low-NOx Burner

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



Install Low NOx Burner on Boiler No. 2 to Control Nitrogen Oxides (NOx)

Bunge East shall install one Low NOx Burner with Flue Gas Recirculation on Boiler No. 2, which serves as the primary boiler at the Morristown, Indiana Facility, to control NOx emissions associated with burning natural gas. Boiler Nos. 1 and 2 have the capability to burn #2 fuel oil as an alternative fuel. Except for Boilers Nos. 1 and 2, permitted limits and requirements associated with the use of #2 fuel oil remain in place and are not changed by the installation of the control equipment.

4.0 Emission Units Requiring Pollution Control Equipment

The following emission units 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 Morristown, 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
Boiler No. 2 (Stack #20) Natural Gas	Low NOx Burner (NOx)
Boiler No. 2 (Stack #20) and Boiler No. 1 (Stack #14)	Fuel Switch to Lower Sulfur Fuel Oil [1] (SO_2)

[1] Bunge East has two (2) boilers at the Morristown, Indiana Facility. Boiler No. 2 serves as the primary boiler for the Morristown, Indiana Facility and typically burns natural gas. Boiler No. 1 will serve as a backup to Boiler No. 2. Boiler No. 1 and Boiler No. 2 have the capability to burn #2 fuel oil as an alternative fuel. Except for Boilers Nos. 1 and 2, permitted limits and requirements associated with the use of #2 fuel oil remain in place and are not changed by the installation of the control equipment.

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. 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 may be considered non-material modifications under Paragraph 5.b. of the Consent Decree for the Morristown, Indiana Plant, provided Bunge East (1) achieves the emission limits specified in this CTP and the Consent Decree 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
Boiler No.2 (Stack #20) Natural Gas	Low NOx Burner (NOx)	Heat Input: 211 MMBtu/hour NOx Emission Rate: ≤ 0.05 lbs/MMBtu [(1)]
Boiler No.2 (Stack #20) and Boiler No.1 (Stack #14)	Fuel Switch to Lower Sulfur Fuel Oil [(2)] (SO_2)	Sulfur Content of #2 Fuel Oil ≤ 0.05%

[(1)] The estimated NOx emissions reductions will be approximately 129 tons per year for Boiler No. 2, based on the difference between the current annual maximum NOx emissions without a Low Nox Burner to the annual maximum NOx emissions after installation of the Low NOx Burner.

AP-42 Factor = 190 lbs NOx/10^6 scf natural gas

NOx Emissions with no control = 211 MMBtu/hr x 8760 hrs/yr x 190 lbs /10^6 scf x 1ton/2000 lbs x 1000 scf/MMBtu

= 175.6 tons/yr

NOx Emissions after control = 0.05 lbs/MMBtu x 211 MMBtu/hr x 8760 hrs/yr x 1ton/2000 lbs

= 46.2 tons/yr

NOx Emissions Reduction = 175.6 tons/yr – 46.2 tons/yr = 129.4 tons/year

[(2)] Boiler No. 1 and Boiler No. 2 can burn #2 fuel oil as an alternative fuel. Except for Boilers Nos. 1 and 2, permitted limits and requirements associated with the use of #2 fuel oil remain in place and are not changed by the installation of the control equipment.

Estimated Sulfur Dioxide Emissions Reduction Based On Air Permit Limits		
SO_2 Emissions		
249.0	Tons/yr	At 6,343,949 gal/yr Fuel Oil and 0.5% sulfur (existing)
24.9	Tons/yr	At 6,343,949 gal/yr Fuel Oil and 0.05% sulfur (proposed)
224	Tons/yr	Potential SO_2 emissions reduction = 224 tons/yr

6.0 Monitoring Parameters for Pollution Control Equipment

Beginning no more than 30 days following startup of the control equipment listed in Section 4.0 of this CTP or thirty days after lodging of the Consent Decree, whichever is later, Bunge East shall monitor the parameters required by IDEM.

Emission Unit / Pollution Control Equipment	Parameter Monitored
Boiler No. 2 (Stack #20) / Low NOx Burner [1]	NOx

[1] The control equipment listed above shall be equipped with a Continuous Emission Monitoring System (CEMS). All monitoring data shall be collected and recorded and maintained onsite in accordance with the requirements of 40 CFR Part 60. Any deviation of 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.

7.0 Emission Limits

The table below lists the emissions limits that must be met pursuant to the requirements of this CTP and the Consent Decree. Bunge East shall report any deviation from emission limits 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	Pollutant	Emission Limit(s)
Boiler No. 2 (Stack #20) Natural Gas	Low NOx Burner	NOx	0.05 lb/MMBTU [1]
Boiler No. 2 (Stack #20) and Boiler No. 1 (Stack #14)	Fuel Switch to Lower Sulfur Fuel Oil [1]	SO_2	Sulfur Content of Fuel Oil ≤ 0.05% [1]
Conventional Soybean Extraction System	N/A	VOC	Solvent Loss Ratio [2]

[1] Bunge East has two (2) boilers at its Morristown, Indiana Facility. Boiler No. 2 serves as the primary boiler for the Morristown, Indiana Facility and typically burns natural gas. Boiler No. 1 will serve as a backup to Boiler No. 2. Boiler No. 1 and Boiler No. 2 can burn #2 fuel oil as an alternative fuel.
[2] See Section 10.0, Proposed and Final Emission Limits.

8.0 Schedules for Emission Reduction Projects

The following schedule implements Paragraph 29 and 30 of the Consent Decree:

Emission Reduction Project	Schedule
Installation and Operation of Low NOx burner on Boiler No. 2 (Stack #20)	December 31, 2005
Fuel Switch to Lower Sulfur Fuel Oil for Boiler No. 2 (Stack #20) and Boiler No. 1 (Stack #14) [1]	December 31, 2005

[1] Bunge East has two (2) boilers at its Morristown, Indiana Facility. Boiler No. 2 serves as the primary boiler for the Morristown, Indiana Facility and typically burns natural gas. Boiler No. 1 will serve as a backup to Boiler No. 2. Boiler No. 1 and Boiler No. 2 can burn #2 fuel oil as an alternative fuel.

9.0 Pollution Control Equipment Performance Test Schedule and Test Methods

By no later than thirty days after lodging of the Consent Decree, Bunge East shall submit to EPA and IDEM for approval a protocol (the "Protocol") for performance testing as described in the table below. No later than thirty days after approval of the Protocol by EPA and IDEM (or such other date as provided in Protocol), Bunge East shall conduct the following performance testing in accordance with the approved Protocol. 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
Boiler No. 2 (Stack #20) / Low NOx Burner	NOx	CEMS Part 60 Relative Accuracy Test Assessment (RATA)
Boiler No. 2 (Stack #20) and Boiler No. 1 (Stack #14) / Fuel Switch to Lower Sulfur Fuel Oil	Sulfur content of #2 fuel oil	40 CFR Part 60, Appendix A, Method 19 or Provide vendor analysis of fuel delivered, if accompanied by a certification, as specified in Section D.8.9 of the Title V Permit or Other method as approved by EPA and IDEM

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 this CTP by June 30, 2006.

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 0.16 gal/ton VOC solvent loss ratio (SLR) at the Morristown, 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 of 0.16 gal/ton for the Morristown, 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.