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ATTACHMENT G

# Control Technology Plan for Bunge's Destrehan, Louisiana Conventional Soybean Plant

**May, 2006**

# CONTENTS

**SECTION**

## 1.0 Introduction

This Control Technology Plan (CTP) is Attachment G to a Consent Decree signed by Bunge North America, Inc. (Bunge), the United States, and the State of Louisiana, among others. This CTP describes the emission reduction program that Bunge shall implement at its conventional soybean extraction plant which it owns and operates in Destrehan, Louisiana (Destrehan, Louisiana 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 NOx;
(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 shall implement a program with the goal of achieving a reduction of volatile organic compound (VOC) emissions from the soybean solvent extraction plant and nitrogen oxides (NOx) emissions from the two Boilers (Nos. 1 and 2) at the Destrehan, Louisiana 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 Destrehan, Louisiana 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 installing one Low NOx Burner on each of two Boilers (Nos. 1 and 2) at its Destrehan, Louisiana Soybean Plant. If the program reasonably meets the design criteria in Section 5.0 of this CTP, Bunge will operate the Low NOx burners according to the schedule in Section 8.0 of this CTP. The emission reduction benefits from these NOx projects will be addressed in the final NOx emission limit for each boiler, which will be established pursuant to Section 7.0 of this CTP.

## 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 vegetable oil solvent extraction plant.

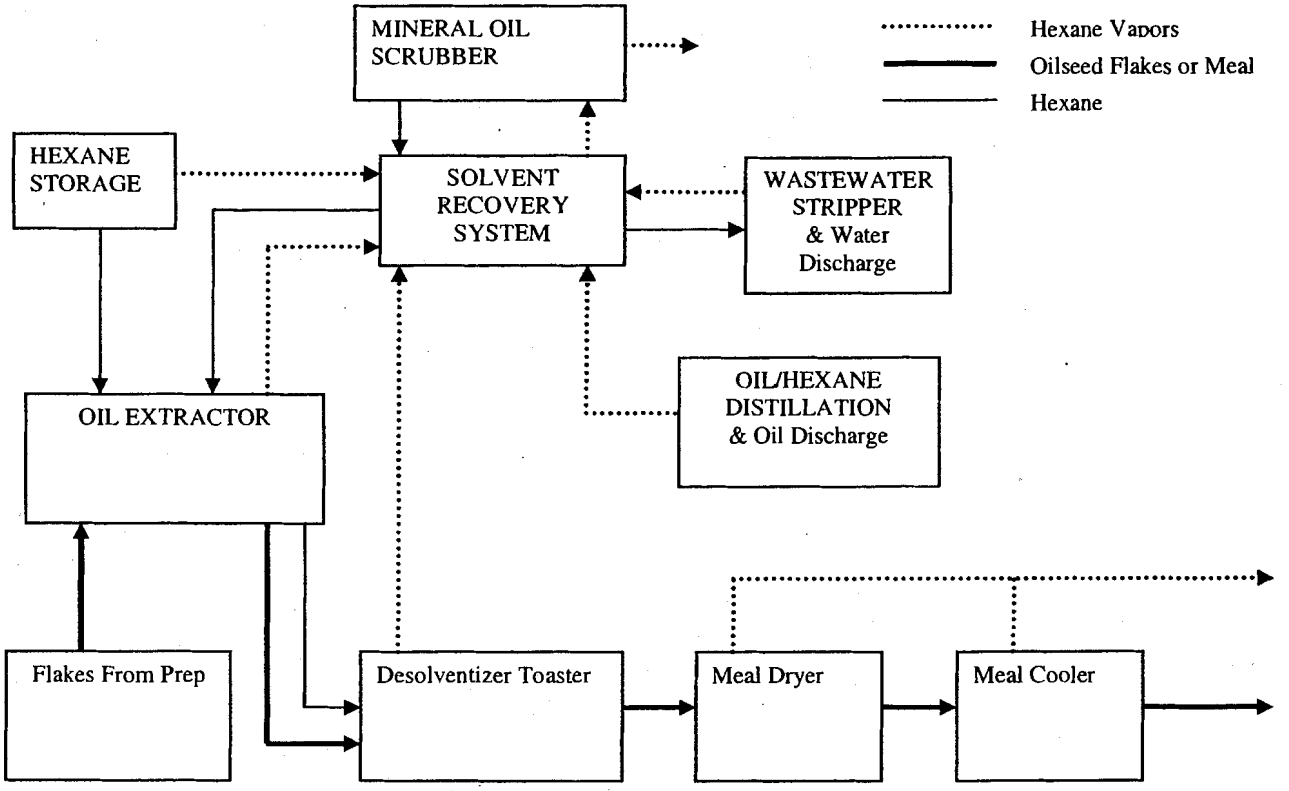
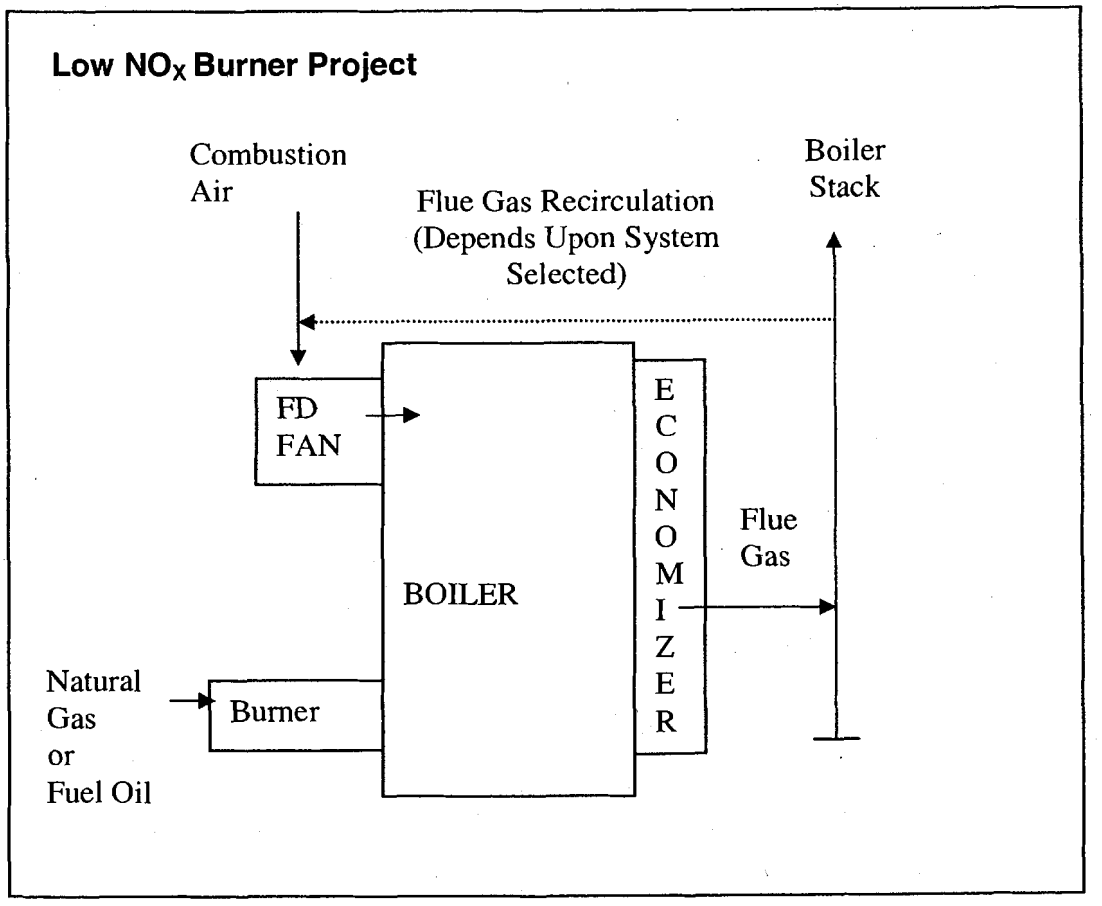


**Diagram 3.2. Process Flow Diagram for Boiler and Low-NOx Burner**

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




Install Low NOx Burner on Each Boiler to Control Nitrogen Oxides (NOx)

One Low NOx Burner will be installed on each of two Boilers (Nos. 1 and 2) at the Destrehan, Louisiana Plant to control NOx emissions associated with burning natural gas. Boiler No. 1 and Boiler No. 2 have the capability to burn fuel oil as an alternative fuel. Permitted limits and requirements associated with the use of 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 pollution control technology or alternative projects designed to reduce emissions. 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 Destrehan, Louisiana Plant, provided Bunge (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 the Louisiana Department of Environmental Quality (LDEQ) as provided in Paragraph 5.b. of the Consent Decree.

| Emission Unit Description | Control Equipment/Optimization Description |
|---|---|
| Boiler No. 1 - Natural Gas [1] | Low NOx Burner (NOx) |
| Boiler No. 2 - Natural Gas [1] | Low NOx Burner (NOx) |

[1] Boiler No. 1 and Boiler No. 2 each can burn fuel oil as an alternative fuel. Permitted limits and requirements associated with the use of 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 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 at the Destrehan, Louisiana Plant, provided Bunge (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 LDEQ as provided in Paragraph 5.b. of the Consent Decree.

| Emission Unit Description | Control Equipment/ Optimization Description | Design Criteria Targets |
|---|---|---|
| Boiler No. 1 - Natural Gas [1] | Low NOx Burner (NOx) | Heat Input: 71.8 MMBtu/hour<br>NOx Emission Rate: ≤ 0.04 lbs/MMBtu[2] |
| Boiler No. 2 - Natural Gas [1] | Low NOx Burner (NOx) | Heat Input: 71.8 MMBtu/hour<br>NOx Emission Rate: ≤ 0.04 lbs/MMBtu[2] |

[1] Boiler No. 1 and Boiler No. 2 each can burn fuel oil as an alternative fuel. Permitted limits and requirements associated with the use of fuel oil remain in place and are not changed by the installation of the control equipment.

[2] The estimated NOx emissions reductions will be approximately 23 tons per year for each boiler, based on the difference between the current allowable NOx emission limit to the annual maximum NOx emissions after installation of the Low NOx Burners.

NOx Allowable Emission Limit = 35.08 tons/year/boiler

NOx Emissions = 0.04 lbs/MMBtu x 71.8 MMBtu/hr x 24 hrs/day x 7 days/wk x 51 wks/yr x 1ton/2000 lbs after control

= 12.30 tons/yr

NOx Emissions Reduction = 35.08 tons/yr – 12.30 tons/yr = 22.78 tons/year

## 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 shall monitor the parameters in accordance with the Destrehan, Louisiana Plant's permits.

## 7.0 Emission Limits

The table below lists the emissions limits that Bunge shall meet pursuant to the requirements of this CTP and the Consent Decree. Bunge shall report any deviation of 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. 1 - Natural Gas [1] | Low NOx Burner | NOx | 0.04 lb/MMBTU |
| Boiler No. 2 - Natural Gas [1] | Low NOx Burner | NOx | 0.04 lb/MMBTU |
| Conventional Soybean Extraction System | N/A | VOC | Solvent Loss Ratio [2] |

[1] Boiler No. 1 and Boiler No. 2 can burn fuel oil as an alternative fuel. Permitted limits and requirements associated with the use of fuel oil remain in place and are not changed by the installation of the control equipment.

[2] See Section 10.0, Proposed and Final Emission Limits.

## 8.0 Schedules for Emission Reduction Projects

The following schedule implements Paragraph 26 of the Consent Decree:

| Emission Reduction Project | Schedule |
|---|---|
| Installation of Low NOx burner on Natural Gas-Fired Boiler No. 1 | December 31, 2006 |
| Installation of Low NOx burner on Natural Gas-Fired Boiler No. 2 | December 31, 2006 |

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

By no later than 180 days after installation of the Low NOx Burners required by Sections 4.0 and 5.0 of this CTP, Bunge shall conduct the following performance testing on Boiler No. 1 and Boiler No. 2.

| Emission Unit / Pollution Control Device | Pollutant(s) Tested | Test Method |
|---|---|---|
| Boiler No. 1 - Natural Gas [1]/ Low NOx Burner | NOx | As applicable, Methods 1, 2, 3A or B, 4, and 7E |
| Boiler No. 2 - Natural Gas [1]/ Low NOx Burner | NOx | As applicable, Methods 1, 2, 3A or B, 4, and 7E |

[1] Boiler No. 1 and Boiler No. 2 each can burn fuel oil as an alternative fuel. Permitted limits and requirements associated with the use of fuel oil remain in place and are not changed by the installation of the control equipment.

Testing for compliance or demonstration of emission limits shall be conducted in accordance with a protocol approved by EPA and LDEQ. Upon prior written approval by LDEQ, Bunge may only be required to test one of the two boilers. During source testing, Bunge shall monitor, at a minimum, the operating parameters specified in Section 5.0 of this CTP.

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

Bunge shall comply with the emission limit established in Section 7.0 of the CTP no later than 180 days after installation of the Low NOx burners.

## 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 shall begin to account for solvent loss and quantity of oilseeds processed to comply with a 0.19 gal/ton VOC solvent loss ratio (SLR) at the Destrehan, Louisiana 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 begins to account for solvent loss under this paragraph.

Final VOC SLR Emissions Limit

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