

# Part 70 Operating Permit Amendment

Permit Amendment No.: 2075-139-0002-V-01-1

Effective Date: April 25, 2003

**Facility Name:** Cargill's Gainesville Vegetable Oil Mill & Refinery  
862 West Ridge Road  
Gainesville, Georgia 30501, Hall County

**Mailing Address:** 862 West Ridge Road  
Gainesville, Georgia 30501

**Parent/Holding Company:** Cargill, Inc.

**Facility AIRS Number:** 04-13-139-00002

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to or in effect under the Act, the Permittee described above is issued an amendment to the Part 70 Operating Permit for:

Incorporating the requirements of 40 CFR 63 Subpart GGGG and Georgia Rules (tt) and (yy).

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted or in effect under that Act, or any other condition of this Permit Amendment and Permit No. 2075-139-0002-V-01-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. TV-13723 dated March 22, 2002; any other applications upon which this Permit Amendment or Permit No. 2075-139-0002-V-01-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 9, which pages are a part of this Permit Amendment, and which hereby become part of Permit No. 2075-139-0002-V-01-0.

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Director  
Environmental Protection Division

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**PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY**

**2.2 Facility Wide Federal Rule Standards**

- 2.2.3 The Permittee shall not exceed an oilseed solvent loss rate of 0.20 gallons of HAP (hexane) per ton of soybeans processed during any 12 consecutive month period. The Permittee shall not exceed a Compliance Ratio of 1 as calculated in accordance with Condition 5.2.11.  
[40 CFR 63.2840]
- 2.2.4 The Permittee shall meet all of the requirements listed in 40 CFR 63.2850(a) and Table 1 of 40 CFR 63.2850, and the schedules for demonstrating compliance for existing sources under normal operation in Table 2 of 40 CFR 63.2850.  
[40 CFR 63.2850(b)]
- 2.2.5 The Permittee shall develop and implement a site-specific plan that specifies detailed procedures that will be followed for monitoring and recording data necessary for demonstrating compliance with all applicable provision of the Vegetable Oil MACT 40 CFR 63, Subpart GGGG and Subpart A. The Permittee shall keep the plan on-site and readily available as long as the source is operational. Any changes made to the plan for demonstrating compliance will involve retaining all previous versions of the plan and making them readily available for inspection for at least five years after each revision. The compliance demonstration plan shall include the items in paragraphs (a)(1) through (a)(7) of 40 CFR 63.2851.  
[40 CFR 63.2851]
- 2.2.6 The Permittee shall develop and complete a Startup, Shutdown and Malfunction Plan (SSM Plan) on or before April 12, 2004. The Permittee shall keep the SSM Plan on-site and readily available as long as the source is operational. The Permittee shall comply with all applicable provisions of 40 CFR 63.2852 pertaining to the SSM Plan.  
[40 CFR 63.2852]

**2.3 Facility Wide SIP Rule Standards**

- 2.3.3 For the purposes of Georgia Rule (tt), the Permittee shall be in compliance with the following permit conditions related to 40 CFR 63 Subpart GGGG on May 1, 2003: Conditions 5.2.8, 5.2.9, 5.2.10, 5.2.11, and 6.2.13(a) and (b). And for the purposes of Georgia Rule (tt) and demonstrating compliance with Condition 2.3.4, these conditions apply to all isomers of hexane.  
[391-3-1-.02(2)(tt)]
- 2.3.4 The Permittee shall not exceed an oilseed solvent loss rate of 0.20 gallons of hexane (all isomers of hexane) per ton of soybeans processed during any 12 consecutive month period.  
[391-3-1-.02(2)(tt)]

**PART 3.0 REQUIREMENTS FOR EMISSION UNITS**

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

**3.4 Equipment SIP Rule Standards**

- 3.4.1 Effective May 1, 2003, the Permittee shall not discharge or cause the discharge into the atmosphere from boiler (Source Code B001) any gases which:
  - c. Contain nitrogen oxides (NOx) emissions in excess of 0.41 lb/MMBtu during the summer ozone season from May 1 through September 30 each year.  
[391-3-1-.02(2)(yy)]
  
- 3.4.10 The Permittee shall conduct annual tune-ups as Reasonably Available Control Technology (RACT) for NOx control on boilers with source codes B002, HPB1, and HPB2, the Hydrogen Reformer HR01, and the Aeroglide Dryer L11A.  
[391-3-1-.02(2)(yy)]

**PART 4.0 REQUIREMENTS FOR TESTING**

**4.1 General Testing Requirements**

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 which pertain to the emission units listed in Section 3.1 are as follows:

- j. Method 7 or 7E for the determination of nitrogen oxides concentration. The sampling time for each run shall be 60 minutes.  
[391-3-1-.02(3)(a)]

**4.2 Specific Testing Requirements**

4.2.1 Unless otherwise specified by the Director, the Permittee shall cause to be conducted on the coal-fired boiler (Source ID B001), a performance test for NOx emissions within 60 days of the issuance of this permit. The test results shall be submitted to the Division within 30 days of the completion of said testing.  
[391-3-1-.02(3)(a)]

**PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)****5.2 Specific Monitoring Requirements**

5.2.6 The Permittee shall monitor the emissions of Nitrogen Oxides (NO<sub>x</sub>) from Boiler B001 using the following procedures:  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Within 60 days after the issuance of this permit, the Permittee shall measure the NO<sub>x</sub> emission rate from Boiler B001. Measurements of nitrogen oxides and oxygen concentrations shall be conducted using the procedures of Gas Research Institute Method GRI-96/0008, EPA/EMC Conditional Test Method (CTM-30) *Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers*. The initial and subsequent measurement periods shall consist of one (1) test run thirty (30) minutes in duration.
- b. The NO<sub>x</sub> emission rates shall be determined using the following equation;

$$E = K C_d F_d \frac{20.9}{20.9 - O_2}$$

where:

E = NO<sub>x</sub> emission rate, (lb/MM Btu)

K = Conversion factor for nitrogen oxides,  $1.194 \times 10^{-7}$  ([lb/scf]/ppm)

C<sub>d</sub> = Concentration of NO<sub>x</sub> (ppm by volume, dry basis)

F<sub>d</sub> = F-factor for coal, 9780 (dscf/MM Btu),

O<sub>2</sub> = Exhaust Gas Oxygen Concentration (percent by volume, dry basis)

- c. Following the initial measurement, the Permittee shall conduct measurements at a frequency of one per calendar week. Weekly measurements shall continue until two (2) consecutive measurements are each less than the emission limit specified in Condition 3.4.1c. Following two (2) consecutive weekly measurements that are each less than the emission limit in Condition 3.4.1c, the measurements may be performed at a frequency of one per calendar quarter (quarters ending March 31, June 30, September 30, and December 31).
- d. Following any quarterly measurement that is greater than the NO<sub>x</sub> emission limit specified in Condition 3.4.1c, the Permittee shall take corrective action in the most expedient manner possible and conduct a new measurement within one unit operating day. Following this measurement, subsequent measurements shall be conducted weekly and quarterly measurements may be resumed as prescribed in Condition 5.2.6.c.

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- e. A unit operating day shall be defined as any day that the unit is operated for more than 30 minutes between 12:00 midnight and the following midnight.
  - f. A record of nitrogen oxides monitoring shall be kept in a form suitable for inspection or submittal for a period of five (5) years. The records shall at a minimum contain the cause and corrective action for all excursions, the date of each measurement, concentration of nitrogen oxides, and the concentration of oxygen.
- 5.2.7 Within 60 days after the issuance of this permit, the Permittee shall perform a tune up of the boilers (Emission Unit ID Numbers B002, HPB2, HPB1), Hydrogen Reformer (Emission Unit ID Number HR01), and the Aeroglide Dryer (Emission Unit ID Number L11A) using the following procedures:  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- a. Inspect, adjust, clean or replace fuel-burning equipment, including the burners, and moving parts necessary for proper operation as specified by the manufacturer.
  - b. Inspect the air-to-fuel ratio control system and make adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
  - c. Using the procedures of Section 4.3 of US Environmental Protection Agency (EPA) document "*Combustion Efficiency Optimization Manual for Operators of Oil and Gas-Fired Boilers*", establish the lowest practical oxygen level at which an emission unit may be safely operated and at which NO<sub>x</sub> emissions are minimized. Measurements of concentrations of NO<sub>x</sub> and Oxygen shall be made using the procedures of EPA/EMC Conditional Test Method (CTM-30) *Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers*.
  - d. Within 30 days following the completion of the tuning of the emission units governed by this condition, the Permittee shall submit to the Division a report containing the emission data, a description of the operating parameters which were adjusted to achieve minimum NO<sub>x</sub> emissions from each emission unit, the parameter values/settings at which minimum NO<sub>x</sub> emissions were achieved for each emission unit, and a description of the procedures which the Permittee will use to ensure that the emission units are operated within the parameter values/settings established during the tuning.
  - e. Following the initial tune up, the Permittee shall perform a tune up on each emission unit on or no more than 30 days prior to May 1 of each Ozone season (May 1 through September 30) provided the emission unit will be operated during the Ozone season.
- 5.2.8 The Permittee shall determine and record the actual solvent loss using procedures in 40 CFR 63.2853 each operating month. If solvent losses have been determined for 12 or more operating months, then the Permittee must also determine the 12 operating months rolling sum of actual solvent loss in gallons by summing the monthly actual solvent loss for the previous 12 operating months. The Permittee shall use Equation 1 of 40 CFR 63.2853 to determine monthly actual solvent loss.  
[40 CFR 63.2853]

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- 5.2.9 The Permittee shall determine and record the weighted average volume fraction of HAP in the actual solvent loss using information and procedures specified in 40 CFR 63.2854. If the monthly weighted average volume fraction of HAP in solvent received have been determined for 12 or more operating months, then the Permittee shall also determine the overall weighted average volume fraction of HAP in solvent received for the previous 12 operating months and use the volume fraction of HAP determined as a 12 operating month weighted average in Equation 2 of 40 CFR 63.2840 to determine the Compliance Ratio.  
[40 CFR 63.2854]
- 5.2.10 The Permittee shall determine and record the quantity of oilseed processed on an as received basis, as defined in 40 CFR 63.2872 using information and procedures in 40 CFR 63.2855. If the quantity of oilseed processed has been determined for 12 or more operating months, then the Permittee shall also determine the 12 operating months rolling sum of each type of oilseed processed for the previous 12 operating months. The Permittee shall use Equation 1 of 40 CFR 63.2855 for determining the monthly quantity of each oilseed processed.  
[40 CFR 63.2855]
- 5.2.11 For each operating month, the Permittee shall calculate and record a Compliance Ratio, which compares the actual HAP loss to allowable HAP loss for the previous 12 operating months using the procedures and Equation 2 of 40 CFR 63.2840.  
[40 CFR 63.2840]

**PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS****6.1 General Record Keeping and Reporting Requirements**

- 6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)
    - vii. Any 12 consecutive month period in which the oilseed solvent loss rate exceeds 0.20 gallons of hexane (all isomers of hexane) per ton of soybeans.  
[Note: This reporting requirement is for Georgia Rule (tt) purposes only. Vegetable Oil MACT Standard reporting is addressed in Conditions 6.2.11 and 6.2.12]
    - viii. Any measurement made in accordance with Condition 5.2.6 on the coal-fired boiler with Emission Unit ID Number B001 that is greater than the NO<sub>x</sub> emission limit specified in Condition 3.4.1c.
  - c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)
    - iii. Any time the tune up required by Condition 5.2.7 is not performed on the Boilers with Emission Unit ID Numbers B002, HPB1, HPB2, the Hydrogen Reformer (Emission Unit ID Number HR01) or the Aeroglidge Dryer (Emission Unit ID Number L11A).

**6.2 Specific Record Keeping and Reporting Requirements**

- 6.2.11 The Permittee shall submit a notification of the compliance status no later than 60 days after the initial twelve operating months compliance ratio is determined, as specified in the vegetable oil MACT 40 CFR 63.2860. The compliance notification must contain the items in 40 CFR 63.2860(d)(1) through (6).  
[40 CFR 63.2860]

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- 6.2.12 The Permittee shall submit the following reports required by the vegetable oil MACT:  
[40 CFR 63.2861]
- a. Annual compliance certifications in accordance with 40 CFR 63.2861(a). The Permittee shall submit the first annual compliance certification 12 calendar months after submitting the notification of compliance status. Each subsequent annual compliance certification is due 12 calendar months after previous annual compliance certification. The annual compliance certification shall provide the compliance status for each operating month during the 12 calendar months period ending 60 days prior to the date on which the report is due. The compliance certification shall include information in paragraphs (a)(1) through (6) of 40 CFR 63.2861.
  - b. Deviation notification reports as per 40 CFR 63.2861(b) for each compliance determination in which the compliance ratio exceeds 1.00 as determined under 40 CFR 63.2861(c). The Deviation notification report shall be submitted by the end of the month following the calendar month in which Permittee determines the deviation and shall include the items in paragraphs (b)(1) through (4) of 40 CFR 63.2861(b).
  - c. Periodic startup, shutdown, and malfunction reports in accordance with 40 CFR 63.2861(c). The Periodic SSM report shall be submitted by the end of the calendar month following each month in which the initial startup period or malfunction period occurred and shall include items (c)(1) through (3) of 40 CFR 63.2861(c).
  - d. The Permittee shall submit an immediate startup, shutdown, and malfunction report in accordance with 40 CFR 63.2861(d) if the Permittee handles a SSM during an initial startup period subject to 63.2850(c)(2) or (d)(2) or a malfunction period subject to 63.2850(e)(2) differently from procedures in the SSM plan. An immediate SSM report consists of a telephone call or facsimile transmission to the responsible agency within 2 working days after starting actions inconsistent with the SSM plan, followed by a letter within 7 working days after the end of the event. The event must include items in paragraphs (d)(1) through (3) of 40 CFR 63.2861(d).
- 6.2.13 The Permittee shall begin maintaining the following records by April 12, 2004 (except as indicated in Condition 2.3.3):  
[40 CFR 63.2862]
- a. If the Permittee processes any listed oilseed, record the items in paragraphs (c)(1) through (3) of 40 CFR 63.2862(c).
  - b. After the facility has processed listed oilseed for 12 operating months, and is not operating during an initial startup period as described in 40 CFR 63.2850(c)(2) or (d)(2), or a malfunction period as described in 40 CFR 63.2850(e)(2), the Permittee shall record the items in paragraphs (d)(1) through (5) of 40 CFR 63.2862 by the end of the calendar month following each operating month.

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- c. For each SSM event subject to an initial startup period as described in 40 CFR 63.2850(c)(2) or (d)(2), or malfunction period as described in 40 CFR 63.2850(e)(2), the Permittee shall record the items in paragraphs (e)(1) through (3) of 40 CFR 63.2862(e) by the end of the calendar month following each month in which the initial startup period or malfunction period occurred.