



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR RESOURCES**

**OPERATING PERMIT**

*CLARIANT CORPORATION*

*(Utilities – Part 5 of 6)*

**PERMIT NO. RI-45-06**

(Expiration date: October 13, 2011)

**Pursuant to the provisions of Air Pollution Control Regulation No. 29, this operating permit is issued to:**

Clariant Corporation  
500 Washington Street  
Coventry, RI 02816

**This permit shall be effective from the date of its issuance. All terms and conditions of the permit are enforceable by EPA and citizens under the federal Clean Air Act, 42 U.S.C. 7401, et seq., unless specifically designated as not federally enforceable.**

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**Stephen Majkut, Chief  
Office of Air Resources**

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**Date of issuance: 10/13/06**

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## SECTION I. SOURCE SPECIFIC CONDITIONS

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### A. Requirements for Emissions Units B001 and B002

The following requirements are applicable to:

- Emissions Unit B001, which is a 63.3 MMBTU/hr Babcock & Wilcox boiler (Lower #1), model no. FM10-70B, equipped with low-NO<sub>x</sub> burners and flue gas recirculation, capable of burning No. 6 fuel oil and natural gas.
- Emissions Unit B002, which is a 63.3 MMBTU/hr Babcock & Wilcox boiler (Lower #2), model no. FM10-70B, equipped with low-NO<sub>x</sub> burners and flue gas recirculation, capable of burning No. 6 fuel oil and natural gas.

#### 1. Emission Limitations

##### a. Particulates

The permittee shall not cause or permit the emissions of particulate matter in excess of 0.1 pounds per million BTU actual heat input. [13.2.1]

##### b. Nitrogen oxides (NO<sub>x</sub>)

The permittee shall not exceed the NO<sub>x</sub> emission limitations of 0.1 pounds per million BTU heat input when operated on natural gas. [27.4.2(a)(1)]

##### c. Opacity

The permittee shall not emit into the atmosphere, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

##### d. Sulfur Oxides

Unless the Director declares in writing after a hearing that a shortage of low sulfur fuel exists, the permittee shall not use or store fuel oil with a sulfur content greater than 1.0% by weight. [8.2]

#### 2. Operating Requirements

- a. B001 and B002 will not be operated on residual oil unless they are equipped with low - NO<sub>x</sub> burners and 10% flue gas recirculation or an equivalent

control. [27.4.2(b)]  
3. Monitoring Requirements

a. Opacity

Emission units B001 and B002 shall be equipped with an opacity monitor with audio alarm [6.2.2(a)]. The opacity monitor shall be calibrated to sound the alarm at 20 percent opacity and shall be operated continuously during the combustion of oil. The audio alarm must be located in an area where it will be heard by the operator or other person responsible for the unit. [6.2.3]

b. The permittee shall measure the fuel used in B001 and B002 monthly. [27.6.3(a)]

4. Testing Requirements

a. Particulates

Compliance with the particulate emissions limitations contained in Condition I.A.1.a of this permit, shall be determined by emission testing conducted by the permittee according to Method 5 of 40 CFR 60, Appendix A, or another method approved by the Office of Air Resources and the USEPA, shall be used. [13.3.1]

The requirements of particulate emission testing may be waived if the Director and the USEPA:

- (1) Specifies or approves, in a specific case, the use of a reference method with minor changes in methodology; or
- (2) Approves the use of an equivalent or alternative method the results of which he has determined to be adequate for indicating whether the permittee is in compliance; or
- (3) Finds that the permittee has demonstrated by other means to the Director's and the USEPA's satisfaction that the source is in compliance with the relevant emissions standards. [13.3.3]

In the absence of data from emissions testing, the Director and the USEPA may determine that an emissions unit is or is not in compliance with the emissions limitations of Condition I.A.1.a of this permit based on available information including, but not limited to, type of fuel burned, design of unit, efficiency of air pollution control systems, operating and maintenance procedures, and emission test results on similar units. [13.3.2]

b. Nitrogen oxides

Emissions testing for compliance with NO<sub>x</sub> control requirements shall be conducted annually. Emissions testing shall comply with the following requirements: [27.5.7(a)]

- (1) An emissions testing protocol shall be submitted to the Office of Air Resources for review and approval prior to the performance of any tests. The Office of Air Resources shall be notified at least 60 days prior to any emissions test. [27.5.7(b)]
- (2) All test procedures used for emissions testing shall be in accordance with the methods set forth in Appendix A of 40 CFR 60 or another method approved by the Office of Air Resources and the USEPA. [27.5.7(c)]
- (3) The permittee of the stationary source shall install any and all test ports or platforms necessary to conduct the required emissions testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [27.5.7(d)]
- (4) All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitation. [27.5.7(e)]
- (5) Emissions testing shall consist of 3 one-hour test runs. Compliance shall be based on one hour average concentrations and must be demonstrated for each test run. [27.5.5]
- (6) All emissions testing must be observed by the Office of Air Resources or its authorized representative to be considered acceptable. [27.5.7(f)]
- (7) A final report of the results of emissions testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing. [27.5.7(g)]

c. Opacity

Tests for determining compliance with the opacity limitations specified in Condition I.A.1.c of this permit shall be performed as per the 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

d. Sulfur oxides

Compliance with the sulfur limitations contained in Condition I.A.1.d of this permit shall be determined by procedures referenced in Condition II.U.2 of this permit.

5. Recordkeeping Requirements

- a. The permittee shall record on a monthly basis the fuel used in B001 and B002. [27.6.3(a)]

**B. Requirements for Emissions Unit B003**

The following requirements are applicable to:

- Emissions Unit B003, which is a temporary rental boiler with a capacity no greater than 72.1 MMBtu when burning No. 2 fuel oil and 75.8 MMBtu when burning natural gas. The permittee has standing approval to install this temporary boiler on an as-need basis in the event that one of the two Lower House boilers (B001/B002) was lost and/or for planned outages at the Lower Boiler House.

1. Emission Limitations

a. Natural Gas Firing

- (1) Nitrogen oxides (as nitrogen dioxide (NO<sub>2</sub>))

The emission rate of nitrogen oxides discharged to the atmosphere from B003 shall not exceed 0.10 lbs per million BTU heat input or 7.21 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(1)(a), 27.4.2(a)(1)]

- (2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from B003 shall not exceed 0.08 lbs per million BTU heat input or 6.06 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(1)(b)]

- (3) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from B003 shall not exceed 0.003 lbs per million BTU heat input or 0.22 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(1)(c)]

(4) Particulates

The permittee shall not cause or permit the emissions of particulate matter in excess of 0.1 pounds per million BTU actual heat input. [13.2.1]

b. Oil Firing

(1) Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))

The emission rate of nitrogen oxides discharged to the atmosphere from B003 shall not exceed 0.12 lbs per million BTU heat input or 8.64 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(2)(a), 27.4.2(a)(2)]

(2) Carbon Monoxide (CO)

The emission rate of carbon monoxide discharged to the atmosphere from B003 shall not exceed 0.035 lbs per million BTU heat input or 2.52 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(2)(b)]

(3) Sulfur Dioxide (SO<sub>2</sub>)

(a) All fuel burned in B003 shall contain no more than 0.3 percent sulfur by weight. [Approval No. 1644 (A)(2)(c)(1), 8.2, 40 CFR 60.42c(d)]

(b) The emission rate of sulfur dioxide discharged to the atmosphere from B003 shall not exceed 20.30 lbs/hr. [Approval No. 1644 (A)(2)(c)(2)]

(4) Particulate Matter

The emission rate of particulate matter discharged to the atmosphere from B003 shall not exceed 0.014 lbs per million BTU heat input or 1.0 lbs/hr whichever is more stringent. [Approval No. 1644 (A)(2)(d), 13.2.1]

(5) Total Nonmethane Hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons discharged to the atmosphere from B003 shall not exceed 0.0013 lbs per million BTU heat input or 0.01 lbs/hr, whichever is more stringent. [Approval No. 1644 (A)(2)(e)]

- c. Visible emissions from B003 shall not exceed 10% opacity (6-minute average). [1.2, Approval No. 1644 (A)(3), 40 CFR 60.43c(c)] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

## 2. Operating Requirements

- a. The maximum firing rate of B003 shall not exceed 72,100 ft<sup>3</sup>/hr of natural gas or 480 gal/hr of No. 2 fuel oil. [Approval No. 1644 (B)(1)]
- b. The permittee shall limit the combined quantity of No. 2 fuel oil and natural gas combusted in B003 to 691,200 gallons #2 fuel oil equivalents or less for any consecutive 12 month period. For purposes of this limitation, each 150 cubic feet of natural gas shall be considered equivalent to one gallon of #2 fuel oil. [Approval No. 1644 (B)(2)]
- c. B003 shall be operated only in the event of the loss of availability of either B001 or B002 in the Lower Boiler House, or the loss of availability of the Lower Boiler House auxiliary systems (fuel supply, feed water, etc.) or for a planned outage of the auxiliary systems for maintenance purposes. [Approval No. 1644 (B)(3)]

## 3. Monitoring Requirements

- a. Natural gas and fuel oil flows for B003 shall be continuously measured. [Approval No. 1644 (C)(2), 27.6.3(a)]
- b. Continuous emissions monitoring equipment shall be installed, operated, and maintained for opacity when B003 is operating on fuel oil. [1644(C)(1), 6.2.1]

## 4. Testing Requirements

- a. Particulates

Compliance with the particulate emissions limitations contained in Conditions I.B.1.a(4) and I.B.1.b(4) of this permit, shall be determined by emission testing conducted by the permittee according to Method 5 of 40 CFR 60, Appendix A, or another method approved by the Office of Air Resources and the USEPA, shall be used. [13.3.1]

The requirements of particulate emission testing may be waived if the Director and the USEPA:

- (1) Specifies or approves, in a specific case, the use of a reference

- method with minor changes in methodology; or
- (2) Approves the use of an equivalent or alternative method the results of which he has determined to be adequate for indicating whether the permittee is in compliance; or
  - (3) Finds that the permittee has demonstrated by other means to the Director's and the USEPA's satisfaction that the source is in compliance with the relevant emissions standards. [13.3.3]

In the absence of data from emissions testing, the Director and the USEPA may determine that an emissions unit is or is not in compliance with the emissions limitations of Conditions I.B.1.a(4) and I.B.1.b(4) of this permit based on available information including, but not limited to, type of fuel burned, design of unit, efficiency of air pollution control systems, operating and maintenance procedures, and emission test results on similar units. [13.3.2]

b. Opacity

Tests for determining compliance with the opacity limitations specified in Condition I.B.1.c of this permit shall be performed as per the 40 CFR 60, Appendix A, Method 9; 40 CFR 60.8; and this Section. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

c. Sulfur oxides

Compliance with the sulfur limitations contained in I.B.1.b(3)(a) of this permit shall be determined by procedures referenced in Condition II.U.2 of this permit. [Approval No. 1644(D)(1)]

5. Recordkeeping Requirements

- a. Natural gas and fuel oil flows for B003 shall be continuously recorded. [Approval No. 1644 (C)(2), 27.6.3(a)]
- b. The permittee shall, on a monthly basis, no later than 5 days after the first of the month, determine the fuel use in B003 for the previous 12 months. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [Approval No. 1644 (E)(1)]

- c. The permittee shall document and maintain records of:
  - (1) The conditions causing any loss of availability of either B001 or B002 in the Lower Boiler House, or the loss of availability of the Lower Boiler House auxiliary systems (fuel supply, feed water, etc.) as well as the duration of the condition; and, [Approval No. 1644 (E)(8)(a)]
  - (2) The conditions causing natural gas to be not available, including notification from the fuel supplier of the length of time that such a condition is projected to continue. [Approval No. 1644 (E)(8)(b)]

6. Reporting Requirements

- a. The permittee shall notify the Office of Air Resources whenever its fuel usage for the B003 for any consecutive 12 month period exceeds 691,200 gallons of No. 2 fuel oil equivalents for the combined quantity of natural gas and #2 fuel oil. [Approval No. 1644 (E)(2)]
- b. The permittee shall notify the Office of Air Resources, in writing, of the date of initial start-up of B003, no later than five days after such date, each time B003 is put into service. [Approval No. 1644 (E)(3)]
- c. The permittee shall notify the Office of Air Resources, in writing, of the date of removal of B003, no later than five days after such date. [Approval No. 1644 (E)(4)]
- d. The permittee shall notify the Office of Air Resources of any anticipated noncompliance by B003 with the terms of Section I.B of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1644 (E)(7)]

7. Other Permit Conditions

- a. To the extent consistent with the requirements of Section I.B of this permit and applicable federal and state laws, B003 shall be designed, constructed and operated in accordance with the representation of the facility in the preconstruction permit application prepared dated 3 November 2000. [Approval No. 1644 (F)(1)]
- b. At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the

Office of Air Resources, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. [Approval No. 1644 (F)(4)]

- c. B003 may be subject to the requirements of the Federal New Source Performance Standards 40 CFR 60, Subparts A (General Provisions) and Dc (Small Industrial-Commercial-Institutional Steam Generating Units). Compliance with all applicable requirements therein is required. [Approval No. 1644 (F)(3)]

### C. Requirements for Emissions Unit E006

The following requirements are applicable to:

- Emissions Unit E006, which is a 425 hp Cummins engine, model no. MTA855GC, which burns diesel fuel oil. E006 is an emergency/standby unit.

#### 1. Emissions Limitations

##### a. Opacity

The permittee shall not emit into the atmosphere, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

##### b. Sulfur oxides

Unless the Director declares in writing after a hearing that a shortage of low sulfur fuel exists, the permittee shall not use or store fuel oil with a sulfur content greater than 1.0% by weight. [8.2]

#### 2. Operating Requirements

- a. E006 shall be operated only as a mechanical or electrical power source when the primary power source has been rendered inoperable. This does not include power interruptions pursuant to an interruptible power service agreement. [27.1.8]

- b. E006 shall be operated less than 500 hours each during any consecutive 12-month period. If the hours of operation for E006 exceeds 500 hours in any 12 month period, the unit shall immediately be in compliance with RACT as specified in APC Regulation No. 27. [27.2.3]

#### 3. Monitoring Requirements

- a. The permittee shall operate and maintain a non-resettable elapsed time meter on E006 to indicate, in cumulative hours, the elapsed engine operating time. [27.6.10(b)]

4. Testing Requirements

- a. Opacity

Tests for determining compliance with the opacity limitations specified in Condition I.C.1.a of this permit shall be performed as per the 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

- b. Sulfur oxides

Compliance with the sulfur limitations contained in Condition I.C.1.b of this permit shall be determined by procedures referenced in Condition II.U.2 of this permit.

5. Recordkeeping Requirements

- a. The permittee shall determine and record on a monthly basis, no later than five working days after the first of the month, the total hours of operation for E006 for the previous twelve (12) month period. [27.6.10(c)]

6. Reporting Requirements

- a. The permittee shall notify the Office of Air Resources, in writing, whenever the hours of operation in any 12-month period exceed 500 hours for E006. [27.6.10(d)]

**D. Requirements for Emissions Unit E007**

The following requirements are applicable to:

- Emissions Unit E007, which is a 1232 hp Kohler engine/generator set, Model No. 750ROZD, which burns diesel fuel oil. E007 is an emergency/standby unit.

1. Emissions Limitations

- a. Opacity

Visible emissions from E007 shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one-hour. This visible emission limitation shall not apply during startup of an

engine. Engine startup shall be defined as the first ten minutes of firing following the initiation of firing. [1.2, Approval No. 1709 (A)(2)] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

b. Sulfur oxides

All diesel fuel burned in E007 shall contain no more than 0.3 percent sulfur by weight. [8.2, Approval No. 1709 (A)(1)]

2. Operating Requirements

a. E007 shall be operated only to provide emergency electrical power in the event of a power outage or for maintenance purposes to assure that E007 is in working order. [Approval No. 1709 (B)(3), 27.1.8]

b. E007 shall not be used in conjunction with any utility voluntary demand reduction program. [Approval No.1709 (B)(4)]

c. E007 shall be operated less than 500 hours during any consecutive 12-month period. If the hours of operation for E007 exceed 500 hours in any 12 month period, the engine shall immediately be in compliance with RACT as specified in APC Regulation No. 27. [27.2.3, Approval No.1709 (B)(2)]

d. The maximum firing rate for E007 shall not exceed 63.1 gallons per hour. [Approval No. 1709 (B)(1)]

3. Monitoring Requirements

a. E007 shall be equipped with a non-resetable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. [27.6.10(b), Approval No. 1709 (C)(1)]

4. Testing Requirements

a. Opacity

Tests for determining compliance with the opacity limitations specified in Condition I.D.1.a of this permit shall be performed as per the 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

b. Sulfur oxides

Compliance with the sulfur limitations contained in Condition I.D.1.b of this permit shall be determined by procedures referenced in Condition II.U.2 of

this permit.

5. Recordkeeping Requirements

- a. The permittee shall, on a monthly basis, no later than five (5) days after the first of each month, determine and record the hours of operation and fuel use for E007 for the previous 12-month period. [Approval No. 1709 (E)(1), 27.6.10(c)]

6. Reporting Requirements

- a. The permittee shall notify the Office of Air Resources, in writing, whenever the hours of operation in any 12-month period exceed 500 hours for E007. [27.6.10(d), Approval No. 1709 (E)(2)]
- b. The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.D of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1709 (E)(3)]
- c. The permittee shall notify the Office of Air Resources of any noncompliance with the terms of Section I.D of this permit, in writing, within 5 days of the occurrence. [Approval No. 1709 (E)(6)]

7. Other Requirements

- a. To the extent consistent with the requirements in Section I.D of this permit and applicable Federal and State laws, E007 shall be operated in accordance with the representation of the equipment in the permit application dated 8 April 2002. [Approval No. 1709 (F)(1)]
- b. At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Approval No. 1709 (F)(3)]

**E. Requirements for Emissions Units E003 and E004**

The following requirements are applicable to:

- Emissions Unit E003, which is a 250 hp Cummins engine, model no. 6BTA5.9FI, which

- burns diesel fuel oil. E003 is a fire pump.
- Emissions Unit E004, which is a 340 hp Cummins engine, model no. NT380EF, which burns diesel fuel oil. E004 is a fire pump.

1. Emissions Limitations

a. Opacity

The permittee shall not emit into the atmosphere, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

b. Sulfur oxides

Unless the Director declares in writing after a hearing that a shortage of low sulfur fuel exists, the permittee shall not use or store fuel oil with a sulfur content greater than 1.0% by weight. [8.2]

2. Testing Requirements

a. Opacity

Tests for determining compliance with the opacity limitations specified in Condition I.E.1.a of this permit shall be performed as per the 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

b. Sulfur oxides

Compliance with the sulfur limitations contained in Condition I.E.1.b of this permit shall be determined by procedures referenced in Condition II.U.2 of this permit.