



# Florida Department of Environmental Protection

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590  
Phone: 904/807-3300 ♦ Fax: 904/448-4366

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

## PERMITTEE:

Clariant Life Science Molecules (Florida), Inc.  
Post Office Box 1466  
Gainesville, Florida 32602

I.D. Number: 0010049  
Permit/Cert Number: 0010049-009-AF  
Modification Date: August 2, 2007  
Expiration Date: February 23, 2012  
County: Alachua  
Latitude/Longitude: 29°42 '21"N; 81°15'58"W  
UTM: E-(17)377.6 ; N-3286.7  
Project: Small Scale Organic Chemical  
Manufacturing Facility  
FESOP Modification

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-210, 62-212, 62-296, 62-297 and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

This FESOP establishes a federally enforceable Ammonia emissions limits below the Title V threshold of 100 tons per year. Ammonia emissions from the HMDS process are now captured by an ammonia absorber followed by a scrubber. Aqueous ammonium chloride waste is now sent offsite for disposal.

**Project 009 is the modification of Permit No. 0010049-007-AF to designate (Emissions Point 33) the two 6.27 MMBtu/hr natural gas fired boilers as exempt emissions points.**

For the operation of a small-scale batch organic chemical manufacturing facility (identified as Emissions Unit 005) that develops and manufactures customized chemical products on laboratory and larger scale. Manufacturing areas consist of: **1)** Building 25/26 (Prosil) process area; **2)** Process Water and Storm Water Treatment area; **3)** Building 21 (Uracil) process area; **4)** Building 18 process area; **5)** Building 39 process area; **6)** Building 5 (Pilot plant) process area; **7)** Building 20a (Autoclave) process area; **8)** Building 43 (Norbornadiene) process area; **9)** Other operations as described in the application for the FESOP.

Emission Points are identified as follows (*also refer to Table 1*):

- |       |                 |  |
|-------|-----------------|--|
| 02    | Building 5:     | Reactor emissions vented to vertical packed bed fume scrubber (WS 5-1)   |
| 03    | Building 5:     | Reactor emissions vented to aspirator/venturi scrubber   |
| 05    | Building 25/26: | Distillation Columns S-5 and S-6 emissions (Ammoniation processes) are vented to this emission point.  |
| 06-07 | Building 18:    | Aspirators (A-1 and A-2) vented to vertical packed-bed fume scrubber with demister (WS 18-1)   |
| 08    | Building 18:    | Vanaire, Model VT-550 vertical venturi/packed bed fume scrubber with demister. Caustic is used as the scrubbing media to remove chlorosilanes and hydrochloric acids emissions from alkoxysilanes production, or sulfuric acid is used |

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Emission Points are identified as follows (*also refer to Table 1*):

- as the scrubbing media to remove ammonia or allylamine emissions. Nominal scrubber flow rate is 17-28 gallons per minute through the venture and 25-55 gallons per minute through the packed bed. The design airflow rate is 2000 acfm. Exhaust gases exit at approximately 100° F from a 0.9' diameter stack that is 80' tall. Removal efficiency is estimated to be 99% or greater for chlorosilanes, hydrogen chloride, ammonium chloride, alkoxy silane and siloxanes and amines (allylamine) emissions (WS 18-1).
- 09 Building 18: Vanaire, Model VT-550 vertical venturi/packed bed fume scrubber with demister. Caustic is used as the scrubbing media to remove chlorosilanes and hydrochloric acids emissions from alkoxy silanes production, or sulfuric acid is used as the scrubbing media to remove ammonia or allylamine emissions. Nominal scrubber flow rate is 17-28 gallons per minute through the venture and 25-55 gallons per minute through the packed bed. The design airflow rate is 2000 acfm. Exhaust gases exit at approximately 100° F from a 0.9' diameter stack that is 80' tall. Removal efficiency is estimated to be 99% or greater for chlorosilanes, hydrogen chloride, ammonium chloride, alkoxy silane and siloxanes and amines (allylamine) emissions (WS 18-2)
- 10 Building 18: Various reactor emissions vented to (2) vertical packed bed fume scrubbers in series (WS 18-3).
- 11 Building 18: Carbon bed absorber (used only during TMT production)
- 13 Building 20a: 200 and 500 gallon high-pressure autoclaves vented to scrubbers (WS 20-1)
- 15a Building 25: Distillation column S-4 emissions vented to Aspirator
- 21 Building 25/26: Distillation columns S-5 and S-6 (non-ammoniation processes), silane absorber, a venturi vertical packed-bed fume scrubber, and two HCl absorbers emissions vented to caustic vertical packed-bed fume scrubber (WS 26-5).
- 22 Building 25/26: Distillation columns S-5 and S-6 (non-ammoniation processes), silane absorber, a venturi vertical packed-bed fume scrubber, and two HCl absorbers, tank farm and drumming operations emissions vented to venturi vertical packed-bed fume scrubber (WS 26-6)
- 26 Process Water Treatment: Packed bed VOC stripper for process water treatment
- 28 Building 39: Venturi scrubber (WS 39-1) followed by a vertical packed-bed fume scrubber (WS 39-2); Ammoniation processes are vented to this emission point.
- 31 Building 39: R-14 Ammoniation process vent
- 33 Building 27, 27a: (2) Natural Gas Fired Boilers for steam generation (**Exempt Emissions Points**)

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**APPLICABLE FEDERAL REGULATIONS:**

Regulation	Description
40 CFR 60, Subpart NNN - Volatile Organic Compounds from SOCM I Distillation Operations	Continuous distillation process in the Norbornadiene process. Recordkeeping and reporting requirements only.
BACT Determination	Dated 12-12-96.

**FACILITY INFORMATION**

Clariant Life Sciences Molecules (LSM), Inc. is a specialty chemical facility that manufactures primarily organofunctional silanes and organofluorine intermediates. Clariant manufactures approximately 850 products annually, with about 100 of these being made on commercial scale each year and the remainder being made on laboratory and pilot plant scale as needed to maintain inventory and to meet customer demand. Clariant does not normally operate equipment dedicated to a single product. Most equipment has the general purpose of batch processing and is used in a flexible manner to process any product based on scheduling and customer needs.

The reactors in Building 18 are used to manufacture several categories of specialty chemicals using batch operations. In general, the processes conducted in any of existing reactors can consist of one or more of the following steps: raw material charging, reaction, distillation, filtering, product storage, and product loading. The processing of a given chemical varies depending upon the chemical, therefore the equipment can be used interchangeably on a product-specific basis.

**OPERATING LOCATION**

Located at 5002 NE 54<sup>th</sup> Place, Gainesville, Alachua County, Florida.

**RELEVANT DOCUMENTS**

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department:

Non-Title V Air Permit Application received on June 18, 2007.

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**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permitted to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
  - a. Have access to and copy any record that must be kept under the conditions of the permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
  - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

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**GENERAL CONDITIONS:**

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the

Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (X) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- (X) Compliance with New Source Performance Standards (NSPS)
- ( ) Compliance with National Emission Standards for Hazardous Air Pollutants/ Maximum Available Control Technology (MACT)

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14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
  - the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurement;
  - the dates analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

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**SPECIFIC CONDITIONS:****ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS**

1. **Hours of Operation:** The hours of operation for these emission points are not restricted.  
[Rules 62-4.160(2), 62-210.200(PTE), F.A.C.]

**EMISSION LIMITATIONS AND PERFORMANCE STANDARDS**

2. **(EP33) Exempt Boilers:** The firing of natural gas shall be the BACT for both 6.27 MMBtu/hr boilers located in Buildings 27 and 27a.
3. The permitted maximum allowable emission rate for each pollutant is as follows:

POLLUTANT	LOCATION	EMISSION RATE	FAC RULE
Total Volatile Organic Compounds	Facility-wide	Less than 100 tons per year <b>NOTE (1)</b>	62-210.200(PTE)
Individual Hazardous Air Pollutants <b>NOTES (2) (3)</b>	Facility-wide	Less than 10 tons per year <b>NOTE (1)(4)</b>	62-210.200(PTE)
Total Combined Hazardous Air Pollutants <b>NOTES (2) (3)</b>	Facility-wide	Less than 25 tons per year <b>NOTE (1)</b>	62-210.200(PTE)
Ammonia	Facility-wide	Less than 100 tons per year <b>NOTE (1)</b>	62-210.200(PTE)

**NOTE (1)** Limit established to escape Title V classification.

**NOTE (2)** Hazardous Air Pollutants (HAPs), as defined in Section 112(g) of the Clean Air Act.

**NOTE (3)** Any of the HAPs listed in Table 2 (attachment) may be emitted by the facility.  
Emissions are not to exceed the limits specified above.

**NOTE (4)** Limit established to escape Title III classification.

4. **General Visible Emissions Standard – Facility-wide:** Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions elsewhere in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). If a special compliance test is required, the test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.  
[Rule 62-296.320(4)(b)1., F.A.C.]

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**SPECIFIC CONDITIONS:**

5. **Objectionable Odor:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An objectionable odor is any odor present in the outdoor atmosphere, which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.  
[Rule 62-296.320(2), F.A.C., Objectionable Odor Prohibited; and, Rule 62-210.200(181), F.A.C., Definitions-Objectionable Odor]

6. **Unconfined particulate matter:** No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

Reasonable precautions to prevent emissions of unconfined particulate matter at this facility are stated as follows:

- All bulk solids are delivered to the facility in containers, and are manually loaded into process equipment.
- Solid materials are handled in enclosed areas, where possible.
- Products in solid form are stored and shipped in containers.
- No outdoor storage piles are located on-site.
- General housekeeping measures are performed throughout the plant site, including sweeping, washing and collection of spilled materials.

[Rule 62-296.320(4)(c)2., F.A.C.]

7. **Volatile organic compounds emissions or organic solvents emissions:** The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Procedures to minimize VOC emissions shall include, but not limited to:

- a. Maintain tightly fitting cover, lids, etc. on all containers of materials containing VOC when they are not being handled, tapped, etc.
- b. Where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use.
- c. All fittings, valves, lines, etc., shall be properly maintained.
- d. All VOC spills shall be attended to immediately and the materials properly disposed of, recycled, etc.

[Rule 62-296.320(1), F.A.C.]

8. The Permittee shall conduct all necessary maintenance and make all necessary attempts to maintain the air pollution control equipment specified in this permit in proper operating condition at all times.

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**SPECIFIC CONDITIONS:**

9. The air pollution control equipment specified in this permit shall be operated at all times during which the process equipment associated with the control equipment is operated under conditions where there is a potential to emit HAPs, VOCs, or any regulated air pollutant, except during periods of malfunctions or emergencies when operation of such equipment is not feasible.
10. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable control device operating properly.  
 [Rule 62-210.650, F.A.C., Circumvention].
11. Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.  
 [Rule 62-210.700(5), F.A.C.]
12. The Permittee is authorized to operate equipment, vary production rates and schedules, and make operating adjustments as needed to support its business activity provided that **Specific Condition 3** is adhered to at all times.  
 [Air Operation Permit No. 0010049-005-AF]
13. Test the emissions for the following pollutant(s) within 60 days prior to the date specified below, notify the Department 15 days prior to testing [FAC Rule 297.310(7)(a)9], and submit the test report documentation to the Department with the operation permit application within 45 days after completion of the testing [FAC Rule 297.310(8)(b)]:

POLLUTANT	LOCATION IDENTIFICATION	TEST METHOD	TEST DATE
VOC	Emissions Point 21	Method 25 or 25A	Upon Permit Renewal (Every 5 Years)
VOC	Emissions Point 28	Method 25 or 25A	Upon Permit Renewal (Every 5 Years)
VOC	Emissions Point 26	<b>NOTE (1)</b>	Upon Permit Renewal (Every 5 Years)
HCl	Emissions Point 21	Method 26	Upon Permit Renewal (Every 5 Years)

**NOTE (1)** Compliance shall be demonstrated by sampling and analyzing the influent and effluent water stream of the air strippers.

Tests and test reports shall comply with the requirements of FAC Rules 62-297.310(8) and 62-297.401, respectively.

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14. In each test report, submit the maximum input/production rate at which this source was operated since the most recent test.
15. The permittee is subject to the provisions of Rule 62-297.310(7), F.A.C., Frequency of Compliance Tests.
16. The permittee of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10 percent of its true value. [Rules 62-297.310(5)(a) and (b), F.A.C., Determination of Process Variables]
17. The Permittee will calculate the cumulative 12-month rolling average emissions of VOC, each HAP listed in Table 2 (attached), and ammonia, on a monthly basis to facilitate the emissions tracking needed to document compliance with **Specific Condition 3**. The calculations will be based on the following method:
  - a. A roster of all processes run in each piece of equipment will be prepared and kept current. The roster will include a traceable identification code and title for each process, the nominal product amount (in pounds), for each process, and factors for determining the emissions of each listed pollutant emitted by the process each time it is run.
  - b. The factors for determining the emissions of each air pollutant emitted by the process each time it is run will be based on scientifically sound engineering calculations or estimates and will be expressed in terms of the pounds of pollutant emitted each time the process is run.
  - c. A traceable record of all production batches run in each piece of equipment will be documented in a production summary for the purpose of calculating the cumulative 12-month rolling average emissions of each pollutant.
  - d. The cumulative 12-month rolling average emissions of each pollutant will be calculated using the process emission factors and the production summary.
  - e. A monthly summation of the cumulative 12-month rolling average emissions of each pollutant emitted by the facility will be maintained.
  - f. Air emissions associated with small scale laboratory productions (i.e., batches less than 50 gallons), can be estimated through a conservative, simplified approach based on sound engineering estimates as an alternative to the procedure specified in **Specific Conditions 17a through 17.e**.

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18. The Permittee will regularly review the cumulative 12-month rolling average emissions of VOC, each HAP, and ammonia, and compare them to the limitations stated in **Specific Condition 3** in order to verify compliance. This review will also enable the Permittee to operate equipment, vary production rates and schedules, and make operating adjustments in a manner that is consistent with meeting the limitations stated in **Specific Condition 3**.
19. The Permittee shall **submit quarterly reports** to the **Northeast District Office** which summarize the emissions for the previous quarter and the cumulative 12-month rolling average emissions for VOC, each HAP, and ammonia, and compare these emissions to the emission limits in **Specific Condition 3**. The report shall also contain a summary of all significant physical changes associated with the emission units at the facility which occurred during the quarter, excluding changes due to routine repair, replacement and maintenance. This summary must include equipment removed during the month. Quarterly reports will be due the 28th day following the end of each quarter. During the construction period of any permitted facility projects, this report shall include a description of construction activities which occurred during the quarter, and shall identify construction which has been completed.
20. Submit an Annual Operation Report for this source on the form required pursuant to Rule 62-210.900(5), F.A.C., Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions (Effective 2-11-99) for each calendar year on or before March 1.
21. All records or reports required as a condition of this permit shall be retained by Clariant Life Science Molecules (Florida), Inc. for a period of at least five (5) years.
22. The Permittee shall maintain up-to-date, readily accessible records of any change made in equipment or process operation that increases the design production capacity of the Norbornadiene process. In addition, the Permittee shall comply with the requirements of 40 CFR 60.665(l)(6) for any increase in the design production capacity above 1 gigagram per year.  
[40 CFR 60.665(j), Subpart NNN - SOCM Distillation Operations]
23. Any revision(s) to the permit (and application) other than those allowed by **Specific Conditions 14 and 18**, must be submitted to the Department, in writing, and approved by the Department prior to implementation.
24. **Excess Emissions:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

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**SPECIFIC CONDITIONS:**

**Specific Condition 24 continued:**

Definitions. Rules 62-210.200(194), (276) and (292), F.A.C. define the following terms.

- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
- b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.
- c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

[Rules 62-210.700(1), F.A.C.; 62-210.200(194), (276) and (292), F.A.C.]

25. **Excess Emissions:** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

26. **Excess Emissions - Malfunctions:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

[Rule 62-210.700(6), F.A.C.]

27. **Air Pollution Control Equipment:** The Permittee shall conduct all necessary maintenance and make all necessary attempts to maintain the air pollution control equipment specified in this permit in proper operating condition at all times.

[Rule 62-4.070(3), F.A.C.]

28. **Air Pollution Control Equipment - Operation:** The air pollution control equipment specified in this permit shall be operated at all times during which the process equipment associated with the control equipment is operated under conditions where there is a potential to emit HAPs, VOCs, or any regulated air pollutant, except during periods of malfunctions or emergencies when operation of such equipment is not feasible.

[Rule 62-4.070(3), F.A.C.]

29. **Air Pollution Control Equipment - Operation:** The permittee shall operate and maintain the scrubbers WS 18-1 and WS 18-2 in accordance with the Operation and Maintenance Plan submitted May 3, 2006.

[Rule 62-4.070(3), F.A.C.]

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**SPECIFIC CONDITIONS:**

30. **Circumvention of Control Devices:** No person shall circumvent any air pollution control device, or allow the emissions of air pollutants without the applicable air pollution control device operating properly.

[Rule 62-210.650, F.A.C.]

**COMPLIANCE MONITORING AND TESTING REQUIREMENTS**

31. **Compliance Testing:** Each emissions point shall be tested for hydrogen chloride emissions while manufacturing HMDS. The control efficiency of each scrubber shall be determined from the stack testing results and the predicted uncontrolled HCl emissions of 0.22 lbs of HCl per pound of HMDS produced<sup>1</sup>. The testing shall be conducted as stated in **Specific Condition No. 13**.

<sup>1</sup> Emission estimate provided in facility Title V Application received June 13, 1996.

[Rule 62-4.070(3), F.A.C.]

32. **Compliance Test Procedures:** Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rule 62-296.414(3)(b), F.A.C.]

33. **Compliance Test Notification:** At least 15 days prior the date on which each formal compliance test is due to begin, the permittee shall provide written notification of the test to the Air Compliance Section of this Office. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company and telephone number of the person conducting the test.

[Rule 62-297.310(7)(a)9., F.A.C.]

34. **Compliance Test Methods:** Testing for demonstration of compliance shall be performed in accordance with EPA Reference Method 26 or 26A for each emissions point. Each test shall consist of three samples runs in accordance with Rule 62-297.310(1), F.A.C. The sampling time of each run shall be in accordance with Rule 62-297.310(4)(a), F.A.C.

[Rule 62-296.414(3), 62-297.310(4)(a)2., and 2.a., F.A.C.]

35. **Operating Rate During Testing:** Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

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Modification Date: August 2, 2007  
Expiration Date: February 23, 2012  
County: Alachua

**SPECIFIC CONDITIONS:**

36. **Required Number of Test Runs:** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

37. **Calculation of Emission Rate:** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

38. **Applicable Test Procedures.**

(a) **Required Sampling Time.**

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

(b) **Minimum Sample Volume.** Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(d) **Calibration of Sampling Equipment.** Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in **Table 297.310-1, F.A.C.**

[Rule 62-297.310(4)(a),(b), and (d), F.A.C.]

**Stack Sampling Facilities**

39. Control equipment shall be provided with a method of access that is safe and readily accessible.

[Rule 62-297.310(6), F.A.C.]

40. Stack sampling facilities shall comply with the requirements of Rule 62-297.310(6), FAC,

[Rule 62-297.310(6), F.A.C.]

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**SPECIFIC CONDITIONS:****Monitoring Requirements.****41. Determination of Process Variables:**

- (a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- (b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

42. The pH of the scrubbing liquid for the scrubber shall be monitored in accordance with the Operation and Maintenance Plan submitted May 3, 2006. The pH shall be 14 when caustic is used as the scrubbing liquid. When sulfuric acid is used as the scrubbing liquid, the percentage shall be monitored in accordance with the Operation and Maintenance Plan submitted May 3, 2006. The percentage shall be between 21- 32% in accordance with the O&M Plan.

[Rule 62-4.070(3), F.A.C.]

**REPORTING AND RECORDKEEPING REQUIREMENTS****43 Test Reports:**

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
  - 1. The type, location, and designation of the emissions unit tested.
  - 2. The facility at which the emissions unit is located.
  - 3. The owner or operator of the emissions unit.
  - 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  - 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.

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**SPECIFIC CONDITIONS:****Specific Condition No. 43 continued:**

6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals, who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

- 44. Excess Emissions:** In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department

[Rule 62-210.700(6), F.A.C.]

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**SPECIFIC CONDITIONS:**

45. **Scrubbing Liquid – pH/Percent Sulfuric Acid:** *The owner/operator shall maintain records of the pH and percentage of sulfuric acid measurements for the scrubbers.*

[Rule 62-4.070(3), F.A.C.]

**ADMINISTRATIVE**

46. The ID Number and Project Name for this source shall be used on all correspondences.
47. Any revision(s) to a permit (and application) must be submitted to the Department, in writing, and approved by the Department prior to implementation.
48. All reports, tests, notifications or other submittals required by this permit shall be submitted to the:

Department of Environmental Protection  
Northeast District – Air Program  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256  
Telephone: 904/807-3300  
Fax: 904/448-4366

49. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations.

[Rule 62-210.300, F.A.C.]

50. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C., Plant Operation-Problems]

51. **General Conditions:** The owner and operator is subject to and shall operate under the **General Permit Conditions 1 through 15** of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.

[Rule 62-4.160, F.A.C.]

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52. A completed **Application for Non-Title V Air Permit Renewal** (DEP Form No. 62-210.900(4), F.A.C.), shall be submitted to the Department at least 60 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit.

[Rules 62-4.055, 62-4.220, 62-210.300(1)(a), and 62-210.300(2), F.A.C.]

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

A handwritten signature in black ink, appearing to read "Christopher L. Kirts".

Christopher L. Kirts, P.E.  
District Air Program Administrator