



# Department of Environmental Protection

# FILE COPY

Lawton Chiles  
Governor

Northwest District  
160 Governmental Center  
Pensacola, Florida 32501-5794

Virginia B. Wetherell  
Secretary

**PERMITTEE:**

Air Products and Chemicals,  
Incorporated

AIRS I.D. Number: 1130004  
Air Permit Number: 1130004006AC  
Emission Units: 005, 032-042  
Date of Issue: October 22, 1996  
Expiration Date: October 22, 2001  
County: Santa Rosa  
Project: #4 Methylamines Plant

FILED  
OCT 24 1996

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 62-296, 62-297 and 62-4. The above named applicant, hereinafter called 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:

Construction of a #4 Methylamines Plant, which includes a Heater, distillation columns, storage tanks and a Cooling Tower. Methyl alcohol is reacted with ammonia to yield methylamine.

Volatile organic compound (VOC) emissions from the #4 Methylamines Plant are estimated at 8.6 tons per year and are controlled through an existing Flare (EU 005), permitted under AO57-179662. Hazardous Air Pollutants (HAPS) emissions are estimated at 3.7 ton per year as methanol.

A 10 MMBTU/hr natural gas fueled Heater (EU 032) is used to reach reaction temperature. NO<sub>x</sub> emissions from the Heater are estimated at 6.0 tons per year and are minimized by proper combustion.

Fugitive VOC and HAPS emissions are minimized by bellows sealed valves, live-loaded packing valves, sealless pumps and welded piping along with an aggressive leak detection program.

Hazardous Organic NESHAPS regulations in 40CFR63 apply to Process Vents (EU 033), Environmental Column Bottoms (EU 034), HON Maintenance Water (EU 035), HON Equipment Leaks (EU 036), Group 1 Storage Tanks (EU 038), HON Shutdown Losses (EU 040) and Heat Exchangers (EU 042).

New Source Performance Standards (NSPS) in 40CFR 60 apply to Non-HON Equipment Leaks (EU 037) and NSPS Storage Tanks (EU 039).

The Cooling Tower (EU 041) is designed to have a drift rate of 0.03% or less of the tower circulation rate, which reduces PM<sub>10</sub> emissions by approximately 70%, for an overall estimated PM<sub>10</sub> emissions of 12.6 tons per year.

1130004006AC

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*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

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This permit is part of a plant-wide project that includes construction of the #4 Methylamines Plant, vent tie-in to the Flare, construction of a Cogeneration Plant, removal of the Riley Union Boiler and reduced operation of the Riley Stoker and the B & W Boilers (as backups to the Cogeneration plant). The Cogeneration Plant is issued under a separate construction permit.

Overall potential emissions from the entire project are reduced by 61.6 tpy. NOx emissions are reduced by 83.5 tpy, while CO emission are reduced by 7.8 tpy. SOx emissions increase by 0.8 tpy, VOC emissions increase by 9.0 tpy, PM10 emissions increase by 16.3 tpy and HAPS increase by 3.7 tpy.

Located south of U.S.90, east of Pace, Santa Rosa County.

SPECIFIC CONDITIONS:

General

1. The attached General Conditions are part of this permit. [FAC Rule 62-4.160]

Construction

2. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during the life of this permit. Projects beyond one year require annual status reports. [FAC Rule 62-4.030]

Operation

3. The maximum allowable heat input is 10 million BTU per hour (EU 032). This is the heat input at which compliance with standards shall be demonstrated. [FAC Rule 62-4.070, FAC Rule 62-296.320(1)(a)]
4. The #4 Methylamines Plant may operate continuously (8760 hours per year). [FAC Rule 62-4.070 and construction application]
5. The requirements for the Flare (EU 005) are as follows:
  - A. The Flare will be operated during all times when emissions are vented through it.
  - B. The Flare pilot shall be continuously monitored. Periods of flame outages will be reported semiannually (January 31 and July 31) to the Department's Northwest District Office.
  - C. The minimum Heating value of the combusted gas shall be 7.45 MegaJoules per standard cubic meter.
  - D. The maximum exit velocity through the Flare vent shall be 60 feet per second.[Permit AO57-179662 amendment September 12, 1995]

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SPECIFIC CONDITIONS:

6. The Permittee is required to provide written notification 30 days after construction commences and within 15 days of startup for the #4 Methylamines Plant NSPS Storage Tanks (EU 039). Further, a written initial report is required within six months of startup. [FAC Rule 62-296.800 and 40CFR60.115b(d)]
7. The vent system from the high pressure and low pressure absorbers shall be inspected in accordance with 40CFR63.148.
8. Group 1 HON Storage Tanks (EU 038), defined as such by meeting the criteria for design storage capacity and stored liquid maximum true vapor pressure in accordance with 40CFR63.111 and 40CFR63 Table 6, shall meet the control, inspection, reporting and recordkeeping requirements of 40CFR63.119-123.
9. The #4 Methylamines Process Vents (EU 033) are designated Group 1 in accordance with 40CFR63.133(h). Any process vent bypass that could divert flow from the Flare (process control device) must be carsealed closed or equipped with a flow indicator that is minimally recorded once every fifteen minutes. Carseal mechanisms must be visually checked monthly for proper closure. Records of flow indicator checks and/or carseal mechanism checks shall be kept and made available for Department inspection. Each period of time when the control device is bypassed must be recorded. [FAC Rule 62-296.820]
10. The #4 Methylamines Environmental Column Bottoms (EU 034) waste water shall be maintained in the Group 2 HON, defined as such by the waste water stream having a total volatile organic hazardous air pollutant average (HAP) concentration (determined from the point of generation) less than 10,000 parts per million (ppm) by weight at any flow rate for compounds listed in 40CFR63 Table 9 and less than 1,000 ppm by weight for flow rates greater than 10 liters per minute. Records of the group determination must be kept on file. [FAC Rule 62-296.820, 40CFR63.111 and 40CFR63.132(i)]
11. A written maintenance plan shall be prepared which identifies potential sources of waste water from #4 Methylamines HON Maintenance Water (EU 035) and #4 Methylamines HON Shutdown Losses (EU 040) which may be discharged during preparation of HAP containing equipment for safe maintenance or inspection and which identifies the best management practices which shall be followed to minimize emissions from these activities. [FAC Rule 62-296.820 and 40CFR63.105]
12. A Leak Detection and Repair (LDAR) program shall be established and maintained in accordance with 40CFR63.160-182, Subpart H, HON for #4 Methylamines HON Equipment Leaks (EU 036) and #4 Methylamines Non-HON (NSPS) Equipment Leaks (EU 037). A written plan of the LDAR program shall be submitted to the Department within 90 days of completion of construction. The plan shall include but not be limited to procedures for leak checks, locations that are leak checked, instrument that does the leak checking, calibration methods and frequency, who conducts the leak checks, who is responsible for repairs, records of repairs and leak check checklists. [FAC Rule 62-296.820]
13. The #4 Methylamines Heat Exchangers (EU 042) shall comply with 40CFR63.104. [FAC Rule 62-296.820]

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**SPECIFIC CONDITIONS:**

14. A startup/shutdown/malfunctions plan shall be submitted to the Department within 90 days of completion of construction. The plan shall include but not be limited to procedures for startup/shutdown, malfunctions and bypasses and forms for recordkeeping of startup/shutdown, malfunctions and bypasses. Actions taken which are inconsistent with the plan must be reported within 2 working days with written follow-up provided within 7 working days. The plan shall be kept readily available for inspection and revisions to the plan will be maintained for 5 years. [FAC Rule 62-296.820 and 40CFR63.6(e)]

15. Semiannual reports are required. These reports are due 30 days after each calendar half year (January 31 and July 31). As part of the required semiannual report, a description of maintenance activities planned for the next six months shall be submitted. [FAC Rule 62-296.820 and 40CFR63.152]

**Emissions**

16. Visible emissions from the Flare stack (EU 005) shall not exceed 5% opacity except for up to two minutes in any one hour at 20% opacity. [Permit AO57-179662 and 40CFR60.18]

17. No objectionable odors shall be allowed off plant property. The Permittee shall submit an odor control plan annually by March 1st of each year. [FAC Rule 62-296.320(2)]

18. All fugitive dust generated at this site shall be adequately controlled. [FAC Rule 62-296.310(3)]

**Testing**

19. Visible emissions tests on the Flare (EU 005) are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method 22 during a two hour observation period. no visible emissions are allowed except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Testing shall be conducted while operating at 90-100% of rated capacity. Such tests shall be conducted every five years within 60 days of the renewal due date and to submitted with permit renewal applications, but no later than 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. More frequent tests may be required if Department inspections show a need for such tests. [Permit AO57-179662 and 40CFR60.18]

**Administrative**

20. An annual operation report (DEP Form 62-210.990(5)) shall be submitted by March 1st of each year. A copy of the form and instructions may be obtained from the Department of Environmental Protection, Northwest District, Air Resources Management Program, (904) 444-8364. [FAC Rule 62-210.370]

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SPECIFIC CONDITIONS:

21. A major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The attached form shall be reproduced by the permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility AIRS I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. [FAC Rule 17-213]

22. The applicant shall retain a Professional Engineer, registered in the State of Florida, for the inspection of this project. Upon completion the engineer shall inspect for conformity to the permit application and associated documents and submit DEP Form 62.210.900(1) for major sources and 62-210.900(2) for minor sources. The application, compliance test report and appropriate fee when required are to be submitted before the expiration of this construction permit and within 75 days after completion of construction if the permittee desires to continue operation. [FAC Rule 62-4.050 and 62-210.300]

23. The permanent source identification numbers for these point sources are:

- 1130004005 Flare
- 1130004032 #4 Amines Gas Fired Heater Stack
- 1130004033 #4 Methylamines Process Vents
- 1130004034 #4 Methylamines Env. Column Bottoms
- 1130004035 #4 Methylamines HON Maint. Water
- 1130004036 #4 Methylamines HON Equipment Leaks
- 1130004037 #4 Methylamines non-HON Equipment Leaks
- 1130004038 #4 Methylamines Group 1 Storage Tanks
- 1130004039 #4 Methylamines NSPS Storage Tanks
- 1130004040 #4 Methylamines HON Shutdown Losses
- 1130004041 #4 Methylamines Cooling Tower
- 1130004042 #4 Methylamines Heat Exchangers

Please cite the appropriate number(s) on all test reports and other correspondence specific to any permitted point source(s). [FAC Rule 62-297.570]

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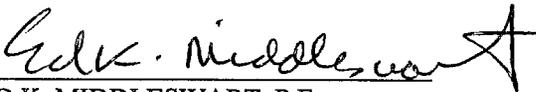
SPECIFIC CONDITIONS:

24. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8364, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 413-9911. For routine business, telephone (904) 444-8364 during normal working hours. [FAC Rule 62-210.700]

Expiration Date:

Issued this 22<sup>nd</sup> day of Oct.,  
1996.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



ED K. MIDDLESWART, P.E.

Air Program Administrator

## 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 403.141, 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 these 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. Nor 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 does not constitute 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 permittee 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, are 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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
  - a. Having access to and copying any records that must be kept under the conditions of this permit;
  - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and,

GENERAL CONDITIONS:

c. Sampling or monitoring 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.

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 noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. 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 proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with 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, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. 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.

GENERAL CONDITIONS:

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 measurement;
- the person responsible for performing the sampling or measurement;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. 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 the 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.