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Pall Corporation
Pall Membrane Technology Center
Facility ID No.: 0330127
Escambia County

Air Construction Permit
Permit No.: 0330127-003-AC

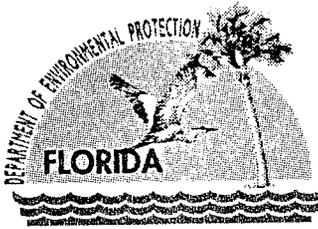
Permitting and Compliance Authority:
Department of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, FL 32501-5794
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Air Construction Permit
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Department of Environmental Protection

Jeb Bush
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

David B. Struhs
Secretary

Permittee:
Pall Corporation
Pall Membrane Technology Center, Inc.

Permit No.: 0330127-003-AC
Facility ID No.: 0330127
SIC Nos.: 30,3081
Project: Regenerative Thermal Oxidizer

This permit is for the construction of a regenerative thermal oxidizer for the control of volatile organic compounds, and the addition of a third membrane casting line. The facility is located at 8780 Ely Road, Ellyson Industrial Park, Escambia County; UTM Coordinates: Zone 16, 480.442 km East and 3376.303 km North; Latitude: 30° 31' 20" North and Longitude: 87° 19' 19" West.

STATEMENT OF BASIS: This air construction permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.) and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210. 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 permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

- Appendix G-1, General Conditions
- Appendix SS-1, Stack Sampling Facilities
- Table 297.310-1, Calibration Schedule

Effective Date: August 5, 1999
Expiration Date: August 5, 2004

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Ed K. Middleswart
Ed K. Middleswart, P.E.
Air Program Administrator

EKM/rb

Post-it® Fax Note	7671	Date	8/12	# of pages	1
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Co./Dept.	PALL CORP.	Co.	DEP AIR		
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Section I. Facility Information.

Subsection A. Facility Description.

This permit is for the construction of regenerative thermal oxidizer (RTO) for the control of volatile organic compounds (VOC) from the process areas, and the addition of a third membrane casting line. The new RTO unit will replace the currently permitted scrubber units as the main VOC control device for the facility. The facility manufactures various filtration devices for pharmaceutical and industrial uses and consists of four different process lines; fabric coating, membrane casting, mixing and membrane finishing. The facility is a synthetic minor and is regulated under Rule 62.296.320(1)(a), F.A.C., requiring necessary controls for VOC emissions. VOC, H073, H090, H096 and H115 are capped to escape classification as a major Title V facility. The addition of the RTO will result in the reduction of VOC from 94 to 44 tons per year.

The RTO is a 2 Million Btu per hour natural gas fired unit. The maximum operational rate is 145 pounds per hour of VOC. The RTO operates at a minimum temperature of 1500 degrees Fahrenheit with a 1 second dwell time and has a destruction efficiency of 97%. The VOC from the different process areas are routed to the RTO for incineration.

This permit also includes the Antarsol process scrubber unit which emits only the VOC 1,1-dichloro 1-fluoroethane (HCFC-141b), an unregulated compound. The Antarsol process scrubber unit is an unregulated emissions unit.

Based on the permit application received July 12, 1999, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
010	Regenerative Thermal Oxidizer

Unregulated Emissions Units and/or Activities	
011	Antarsol Process Scrubber Unit

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The document listed below is not a part of this permit; however, it is specifically related to this permitting action.

This document is on file with permitting authority:
Permit application received July 12, 1999.

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX G-1, GENERAL CONDITIONS, is a part of this permit.
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions 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 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
4. Prevention of Accidental Releases (Section 112(r) of CAA).
 - a. As required by rule, inspection, or change in process the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
 - b. The owner or operator shall report to the Department of Community Affairs (DCA) within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the USEPA/Chemical Safety Hazard Investigation Board or the National Response Center under Section 112(r)(6).
 - c. The owner or operator shall submit the required annual registration fee to the DCA on or before June 21, 1999 and on April 1 annually thereafter, in accordance with Part IV, Chapter 252, F.S. and Rule 9G-21, F.A.C.
5. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) 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. All vats, containers, etc., that are used for temporary and permanent storage of VOC/organic solvents shall be covered when not in use. All equipment, pipes, hoses, lids, fittings shall be operated/maintained in such a manner as to minimize leaks, fugitive emissions and spills of VOC materials. The RTO shall be on-line at all times whenever plant processes are operational and generating VOC.
[Rule 62-296.320(1)(a), F.A.C.]

6. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include, but not limited to, the implementation of good housekeeping practices.

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

7. Permittee shall install and maintain permanent stack sampling facilities, including sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet requirements of Rule 62-297(6), F.A.C and any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

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

8. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

9. 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. An application for a modification to the facility's operating permit shall be submitted with the compliance test results and appropriate fee when applicable. These are to be submitted within 75 days after initial operation.

[Rules 62-210.300(2) and 62-4.050(3), F.A.C.]

10. The permittee shall submit all compliance related notifications and reports required by this permit to the Department's Northwest District office.

Department of Environmental Protection
Northwest District Office
160 Governmental Center
Pensacola, Florida 32501-5794

11. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (850) 595-8364, extension 1220, day or night, and for emergencies involving a significant threat to human health or the environment is (800) 320-0519. For routine business, telephone (850) 595-8364, then press 7, during normal working hours.

[Rules 62-210.700 and 62-4.130, F.A.C.]

12. The Department shall be notified upon commencement of construction. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction. Projects beyond one year require annual status reports.

[Rule 62-4.030, F.A.C.]

Section III. Emissions Unit and Conditions.

Subsection A. This section addresses the following emissions unit.

E.U.

<u>ID No.</u>	<u>Brief Description</u>
010	Regenerative Thermal Oxidizer

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Capacity. The incineration rate shall not exceed 145 pounds per hour of volatile organic compounds.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.2. Methods of Operation. This emissions unit shall be fired by natural gas only.

[Rule 62-4.160(2), F.A.C.]

A.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

A.4. The maximum allowable emission limit for each pollutant is as follows:

Volatile Organic Compounds- 43.8 tons per year.

Dimethyl formamide (H073)- 1.6 tons per year.

Ethylene glycol (H090)- 3.0 tons per year.

Glycol ethers (H096)- 3.2 tons per year.

Methanol (H115)- 1.8 tons per year.

Test Methods and Procedures

A.5. Emissions tests for visible emissions and volatile organic compounds 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. Such tests shall be scheduled within thirty (30) days after initial operation. The Department shall be notified at least fifteen (15) days prior to testing to allow witnessing. Results shall be submitted to the Department within forty-five (45) days after testing.

A.6. Volatile Organic Compounds. The test method for volatile organic compounds shall be EPA test method 25, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rules 62-4.070, 62-297.310(7), and 62-297.401, F.A.C.]

A.7. Visible Emissions. The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rules 62-4.070, 62-297.310(7), and 62-297.401, F.A.C.]

A.8. The test reports shall comply with applicable portions of Rule 62-297.310, F.A.C., Test Reports. The Department can require special compliance tests in accordance with Rule 62-297.310(7) F.A.C. [Rule 62-297.310(7), F.A.C.]

A.9. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impractical to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. [Rules 62-297.310(2) and 62-4.070, F.A.C.]

Monitoring of Operations

A.10. The RTO shall be on-line at all times whenever plant processes are operational and generating VOC. The RTO temperature shall be maintained at a minimum of 1500 degrees Fahrenheit. Copies of the chart recorder output shall be maintained and made available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.11. The Permittee shall maintain records for each area of the production lines showing the hours of operation, production and chemical usage. The VOC and HAP emissions shall be calculated and summarized by month and calendar year. All such records shall be maintained and made available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.12. An annual operating report for air pollutant emitting facility, DEP Form 62-210.990(5), shall be submitted by March 1 of each year. A copy of the form and instructions may be obtained from the Department's Northwest District office. [Rule 62-210.370, F.A.C.]

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Appendix G-1

GENERAL CONDITIONS:

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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,
 - 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

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Appendix G-1

GENERAL CONDITIONS:

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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.

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.

APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)

Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.

2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.

3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.

4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)
(continued)

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

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

TABLE 297.310-1 CALIBRATION SCHEDULE

[Note: This table is referenced in Rule 62-297.310, F.A.C.]

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of at least three readings Max. deviation between readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually 2. One Point: Semiannually 3. Check after each test series	Spirometer or calibrated wet test or dry gas test meter	2%
		Comparison check	5%