

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT**

TO OPERATE AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Hercules, Incorporated
West 7th Street
Hattiesburg, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this 24th, day of March, 1987

MISSISSIPPI NATURAL RESOURCES PERMIT BOARD

**DIRECTOR, BUREAU OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES**

Expires 1st day of April, 1990

Permit No. 0800-00001

Permit Modified: October 27, 1987, February 9, 1988,
March 8, 1988, & May 9, 1989

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PART I
GENERAL CONDITIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any air pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or modifications which will result in new, different, or increased emission of air pollutants must be reported by submission of a new application.
2. The permittee shall at all times maintain in good working order and operate as efficiently as possible all air pollution control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.
3. Solids removed in the course of control of air emissions shall be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering state waters.
4. Any diversion from or bypass of collection and control facilities is prohibited except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Department of Natural Resources Permit Board.
5. Whenever any emergency, accidental or excessive discharge of air contaminants occurs, the office of the Mississippi Department of Natural Resources Bureau of Pollution Control shall be notified immediately of all information concerning cause of the discharge, point of discharge, volume and characteristics, and whether discharge is continuing or stopped.
6. Should the Executive Director of the Mississippi Department of Natural Resources declare an Air Pollution Control Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule.
7. The permittee shall allow the Mississippi Department of Natural Resources Bureau of Pollution Control and the Mississippi Natural Resources Permit Board and/or their authorized representatives, upon the presentation of credentials:
 - a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit, and

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- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.
8. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:
 - a. Violation of any terms or conditions of this permit.
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - c. A change in any condition that required either a temporary or permanent reduction or elimination of authorized air emissions.
9. For renewal of this permit the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Department of Natural Resources Permit Board.
10. Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Natural Resources Bureau of Pollution Control.
11. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
12. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.
13. This permit is non-transferable.
14. This permit is for air pollution control purposes only.

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**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Rosin Processing Area, Emission Point 010, consisting of the following:

- a) Emission Point 011, the Mill Room.
- b) Emission Point 012, the Oil Scrubber preceded by water scrubber serving the extractor, the refinery, and the still house.
- c) Emission Point 013, the Oil Scrubber preceded by a water scrubber serving the Pexite Plant.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Delnav Plant, Emission Point 020, consisting of the following:

- a) Emission Point 021, the Flare.
- b) Emission Point 022, the Limestone Tank No. 1.
- c) Emission Point 023, the Limestone Tank No. 2.
- d) Emission Point 024, the Digestion Sump Vent.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Poly-Pale Plant, Emission Point 030, consisting of the following:

- a) Emission Point 031, a 1.6 MM BTU/hr McKee Boiler (Dowtherm)
- b) Emission Point 032, a 1.6 MM BTU/hr McKee Boiler (Dowtherm)
- c) Emission Point 033, the Water Scrubber Vent
- d) Emission Point 034, the Heat Treatment Vent

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning May 9, 1989, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Neuphor production process, including a carbon adsorption scrubber, Emission Point 038.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Rosin Shed, Emission Point 040, consisting of the following:

- a) Emission Point 041, the Drumming Operation (no controls)
- b) Emission Point 042, the Vapor Hood Water Scrubber serving the flaking operation
- c) Emission Point 043, the Dust Wood Water Scrubber serving the flaking operation.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from Package Boiler No. 5, Emission Point 050.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

SO ₂	4.8 lb/10 ⁶ BTU
Particulate Matter	59.2 lbs/hr
Opacity	40% or except as provided in APC-S-1.

MONITORING REQUIREMENTS

SO ₂	See Part III, No. (1).
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During the period beginning February 9, 1988, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Vinsol Resins Process, Emission Point 060, consisting of the following:

- a) Emission Point 061, the Sealas Furnace No. 1 (process heater)
- b) Emission Point 062, the Sealas Furnace No. 2 (process heater)
- c) Emission Point 063, the Water Scrubber serving Vinsol Kettle No. 1
- d) Emission Point 064, the Water Scrubber serving Vinsol Kettle No. 2

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

Beginning February 9, 1988, the permittee is authorized to also manufacture hard resins in this process area.

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During the period beginning February 9, 1988, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Truline Flaking & Packaging Area, Emission Point 070, consisting of the following:

- a) Emission Point 071, the Flaking Belt Vapor Hood Vent
- b) Emission Point 072, the Dracco Baghouse Model 20-S
- c) Emission Point 073, the Pangborn Baghouse Model 600

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

Beginning February 9, 1988, the permittee is authorized to also handle hard resins in this process area.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Hard Resins Area, Emission Point 080, consisting of the following:

- a) Emission Point 081, the 8.3 MM BTU/hr Struthers-Wells Dowtherm Boiler
- b) Emission Point 082, the Water Scrubber preceded by an oil scrubber

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Continuous Esterification Process Area, Emission Point 090, consisting of the following:

- a) Emission Point 091, the 5 MM BTU/hr Foster Wheeler Dowtherm Boiler
- b) Emission Point 092, the Continuous Esterification Unit (no controls)

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Hard Resins Flaking House, Emission Point 100, consisting of the following:

- a) Emission Point 101, the Bvell Norblo Dust Collector Model No. 396-14-20.
- b) Emission Point 102, the Vapor Hood Vent Scrubber.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Foral and Staybelite Hydrogenation Plant, Emission Point 110, consisting of the following:

- a) Emission Point 111, the 3.3 MM BTU/hr Struthers Wells Dowtherm Boiler
- b) Emission Point 112, the Hydrogenation Process (no controls)

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1989, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Hydrogen Furnace, Emission Point 120.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Pilot Plant Area, Emission Point 130, consisting of the following:

- a) Emission Point 131, the 3.3 MM BTU/hr Struthers Wells Dowtherm Boiler
- b) Emission Point 132, Vent No. 1
- c) Emission Point 133, Vent No. 2

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Resin 731 Area, Emission Point 140, with no controls.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Stills & Dresinate Area, Emission Point 150, consisting of the following:

- a) Emission Point 151, the 5 MM BTU/hr Foster Wheeler Boiler (Dowtherm)

There are to be no emissions to the atmosphere from the process.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Kymene Plant, Emission Point 160, consisting of the following:

- a) Emission Point 161, the Kettle Vent Water Aspirator.
- b) Emission Point 162, the Dust Collector

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Defoamer Plant, Emission Point 170, consisting of the following:

- a) Emission Point 171, the Silica Drier Furnace
- b) Emission Point 172, the Dust Bag

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Rosin Amine D Plant, Emission Point 180, consisting of the following:

- a) Emission Point 181, the 8.3 MM BTU/hr Struthers Wells Dowtherm Boiler
- b) Emission Point 182, the Ammoniation Vent Scrubber
- c) Emission Point 183, the Amine Reactor Vent (no controls)

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Polyrad and Polyol Process Area with water scrubber, Emission Point 190.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Para-Menthane Unit with no controls, Emission Point 200.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Para-Menthane Hydroperoxide Unit Oxidizer Vent, Emission Point 210.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Sulfate Turpentine Refining Unit with a water scrubber, Emission Point 220.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from Carbon Regeneration Furnace with Scrubber, Emission Point 230.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

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During the period beginning March 24, 1987, and lasting until April 1, 1990, the permittee is authorized to operate air emissions equipment and emit air contaminants from the 65 MM BTU/hr Murray MCF 3 Series 59 boiler (Package Boiler No. 6), Emission Point 240.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	0.44 lb/MM BTU
SO ₂	59.3 TPY and 4.8 lb/MM BTU
Opacity	40%

MONITORING REQUIREMENTS

SO ₂	See Part III, Part 5
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PART III
OTHER REQUIREMENTS

- (1) For Emission Point 050, the following condition shall apply:

By this condition the stated facility is allowed sulfur dioxide emissions exceeding those emitted by the facility in 1970. This condition is authorized by the Bureau until August 1, 1987

Operation of this facility at higher sulfur dioxide emission levels than in 1970 after August 1, 1987, is not allowed unless and until subsequent and additional Bureau authorization is given.

Attendant to the authorization stated above, this facility shall make written quarterly reports to the Bureau with the first report to be made ninety (90) days after the natural gas curtailment begins or at the time of reapplication for Permit to Operate, whichever comes first. The reports shall state density, heating value, daily usage (pounds/day), date of use and sulfur content of any and all fuels which exceed 2.2 percent sulfur by weight.

- (2) For Emission Point 060, the following additional condition will also apply:

Records of the operation of the facility must be kept and must show the duration of operation (time and dates) and amount of material processed. These records shall be made available to the Mississippi Bureau of Pollution Control upon request.

- (3) For Emission Point 130, the following condition shall apply.

Since this unit is used for experimental purposes and emissions may change depending on the conditions of the experiments, semi-annual reports shall be made to the Mississippi Bureau of Pollution Control explaining all work done including, as a minimum, the duration of tests, types of raw materials used and products produced, and an assessment of emissions caused.

- (4) For Emission Point 230, the following condition shall apply:

If the scrubber should fail or its effectiveness be reduced, the permittee shall notify the Bureau immediately by phone and follow-up with a letter. The information reported shall include the nature of the failure, time of, estimated repair time, and action taken to preclude a recurrence.

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- (5) For Emission Point 240, the following condition shall apply:

The permittee is limited to a usage of 260,925 gallons/calendar year of No. 6 fuel oil with sulfur content not to exceed 2.9%. A quarterly report shall be submitted detailing the amount of fuel oil used and the fuel oil characteristics. The report shall be postmarked by the 30th day of the month following the end of the calendar quarter.

- (6) The following process areas are assigned Emission Point designations for record keeping purposes. However, all of the following are closed processes, and there should be no emissions from any of them.

<u>Emission Point No.</u>	<u>Description</u>
152	Stills & Dresinate Area
250	Para-Cymene Unit
260	Synthetic Pine Oil Facility
270	Paracol Plant

- (7) For all Emission Points, the following additional condition shall apply:

Good housekeeping shall be maintained to prevent fugitive emissions. Should fugitive emissions become excessive as determined by Bureau inspection or by complaints, additional control measures may be required.

- (8) By June 1, 1988, the permittee shall submit current emissions data for each emission point using the Bureau-approved plan and current storage tank data forms for each storage tank.

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