STATE OF MISSISSIPPI

AIR AND WATER POLLUTION CONTROL COMMISSION

AIR DIVISION

P.O. Box 827

JACKSON, MISSISSIPPI 39205

APPLICATION FOR PERMIT

DATA CODED

3/11/80

THIS SPACE FOR OFFICE USE ONLY.

APPLICATION FOR:

EXISTING FACILITY

RENEWAL OF PERMIT TO OPERATE

APPROVAL TO CONSTRUCT

GENERAL INSTRUCTIONS FOR ALL APPLICANTS:

1. The majority of this form must be completed by all applicants; specific instructions regarding type of permit applied for are given where needed.

2. For applications on Permit to Operate renewals, separate forms must be completed for each defined process, emission point, etc., previously holding a distinct and separate Permit to Operate.

INSTRUCTIONS

NOTE: ALL THIS INFORMATION MUST BE PROVIDED.

1. Name of Facility - give the name of the plant, mill, factory or business for which this application is made.

2. Location of Facility - give street, road or highway, address and UTM or Lat-Long. of facility.

4. Name of Owner - give name of person(s) or corporation which has day-to-day responsibility for ownership of facility.

6. In-plant person to be contacted on pollution matters- give the name of an individual who is usually at the facility who is responsible for knowing about pollution matters.

7-8. Corporate Address - to be filled in for Mississippi facilities with main offices at locations other than that of facility listed in Nos. 1,2, & 3. If none, so indicate.

10. Major Activity - define type of operation and products, show Standard Industrial Classification Number.

11. Operating Schedule - must be provided as stated. If additional description of sporadic operation is needed, attach a sheet of explanation.

FOR ALL APPLICANTS:

This application is made under and in full accord with the provisions of Chapter 258, Mississippi Laws of 1966.

1. Name of Facility - factory, mill, plant, etc. -		Telephone
Woodwaste Boilers #1 and #2 (South Stack)		545-3450
2. Location of Facility	Town	County
West 7th Street	Hattiesburg	Forrest
3. Mailing address of Facility	City	Zip
P. O. Box 1937	Hattiesburg	39401
4. Name of Owner		Telephone
Hercules Inc.		545-3450
5. Mailing address of Owner	City	Zip
P. O. Box 1937	Hattiesburg	39401
6. In-plant person to be contacted on pollution matters		Title
Richard H. Heller		Plant Manager

7. Does facility have a corporate or main office elsewhere? X Yes ___ No

8. If yes, complete corporate name and mailing address City State Zip

Hercules Inc. - Wilmington, DE 19899

9. Correspondence to be sent to 1 4 (6) 8 above. (circle one)

10. Major activity of facility: Woodwaste Incineration

Type of operation and products: Steam

S.I.C. Number: 2861

11. Operating Schedule

	Hours per day	Days per week	Weeks per year
Normal	24	7	52
Seasonal or peak operation period	Hours per day	Days per week	Weeks per year

FOR EXISTING FACILITIES AND RENEWAL OF PERMIT TO OPERATE ONLY:

Facility Permit Status (permits regarding air emissions only)

What permits are presently held by facility: (list)

TYPE PERMIT	EXPIRATION DATE	FACILITY NO.	PROCESS OR EQUIPMENT PERMITTED
Operate	1/28/80	0800-00001-009	Woodwaste Boilers

FOR EXISING FACILITY PERMIT RENEWAL ONLY:

Please answer all the following:

1. Has the facility been modified in any way (including fuel and/or raw material changes) during period covered by the Operating Permit ____Yes X No

2. If No. 1 is yes, was modification made in accordance with permit requirements specified in Regulation APC-S-2?
   ___Yes ___No ___If no, explain _____

3. Have the emission rates from the facility been tested within the last 6 months? ____Yes X No

   If yes, please attach a copy of the stack test report(s).

   NOTE: If no stack emissions test has been made, you may be required to have one performed and submitted in order to prove compliance with emission regulations.

4. Is this facility still operating at the location given in previous applications? X Yes ___No

5. If No. 4 is no, complete the following:

New location: _____

_____

New Mailing Address: _____

_____

Was a request for approval to move made for this new location? ____Yes ____No

Was approval granted? _____Yes ____No

FOR ALL APPLICANTS, WHETHER NEW CONSTRUCTION, EXISTING FACILITY, OR RENEWAL

Control Equipment covered under this application-Please check all applicable and indicate number of units

PARTICULATE EMISSIONS CONTROL EQUIPMENT

1. Cyclone(s)_____
2. Water Scrubber_____
3. Baghouse_____
4. Electrostatic Precipitator_____
5. Venturi Scrubber_____
6. Cyclonic Baghouse_____
7. Cyclonic Scrubber_____
8. Other 2 (Fly Ash Arrestors)

GASEOUS EMISSIONS CONTROL EQUIPMENT

1. Water Scrubber_____
2. Activated Carbon Bed_____
3. Other _____

WASTE DISPOSAL SYSTEMS

1. Solid Waste Incinerator_____
2. Liquid Waste Incinerator_____
3. Wood or other waste fuel recovery boiler _____
4. Gaseous Waste Flare_____
5. Liquid Waste Flare_____
6. Other _____

Pneumatic Conveying System _____

Other (please describe)

FOR ALL APPLICANTS

FUEL BURNING EQUIPMENT
(Except for Refuse Disposal)

This form has 3 pages; each is a continuation of the equipment information from the page before. Please fill in as completely as possible, listing all fuel burning equipment. Reasons should be given explaining any data not filled in.

Page 1

1. Fill in company name and address, plus year for which data is given (if existing facility) at top of page. Use data for most recent calendar year available.

2. Reference Number. Use an identifying number for each boiler, furnace, kiln, etc., and use the same reference number on each of the three pages to identify information for the same unit.

3. Manufacturer and Model Number. Nameplate date for boiler, furnace, kiln, etc. Waste gas flares should also be included on this form and stationary internal combustion engines over 3000 horsepower.

4. Rated Capacity in Millions of BTU per hour.

5. Type of Burner Unit. Use Codes (1*) at bottom of form. If not listed put (11) and specify.

6. Usage. Type of fuel burning equipment. Use codes (2*) at bottom of form. If not listed put (5) and specify.

7. Heat Usage. Percent of heat used for process and percent for space heating.

Page 2

8. Reference Number. Continue reference numbers from Page 1, using same number to identify information for same unit.

9. Stack Parameters.
   Stack Height in feet from ground.
   Stack Inside Exit Diameter in feet.
   Exit Gas Velocity in feet per second. (SCFM may be used if velocity is not known; specify units as SCFM if used.)
   Exit Gas Gemperature in degrees F.

10. Fuel Data
    Fuel Type. Coal, Gas, #2 Oil, #6 Oil, etc.
    Maximum Capacity burned per hour. Gallons, pounds, cubic feet, etc. Specify. Average amount burned per year. Gallons, Tons, Million cubic feet, etc. Specify. Heat Content of Fuel. BTU per Gallon, pound cubic foot, etc., Specify.
    Average Percent Sulfur Content.

Average Percent Ash Content.
(If percent sulfur and percent ash are not known, list fuel type and supplier's name at bottom of page in spaces provided so that information may be obtained.)

Page 3

11. Reference Number. Use same numbers as on Page 1 and 2 to identify information for same unit.

12. Air Pollution Control Equipment.
Manufacturer and Model Number. Information from nameplate. Type. Use Table 1, Page 16. If a wet scrubber, specify gallons per minute of water flow and water pressure if known. Efficiency. Percent design control on pollutants and actual percent control if known.

13. Emission Rates.
Specify tons per year of each of the listed pollutants emitted per year.
Give basis of estimates of pollutants emitted (Material Balance, Stack Tests, Emission Factors, etc.)
(If unit is a kiln or similar unit in which combustion products and process losses vent through a common stack, emissions may be totaled and listed under process losses).

FUEL BURNING EQUIPMENT
(Except for Refuse Disposal)

1 FACILITY NAME	Address	for Agency use Only
Woodwaste Boilers #1 and #2	West 7th Street Hattiesburg, MS 39401	

FACILITY NUMBER	Information for Calender Year	Date
08/ 0/0 0/0/ 0/ 0/1 0/0/9	19 79	3/5/80

2	3	4	5	6	7	
Reference Number	Manufacturer and Model Number	Rated Capacity 10^6BTU/hr	Type of Burner Unit (use code 1*)	Usage (use code 2*)	Most Usage % Process	% Space heat
1	Woodwaste Boilers #1 and #2 (1935)	276	3, 7, 9	1	100	

1* BURNER CODES

1. Cyclone furnace
2. Pulverized coal
3. Spreader Stoker
4. Hand fired
5. Other stoker (specify)
6. Multiple port gas
7. Forced draft gas
8. Atomizing Oil (Stove of Air)
9. Atomizing Oil (Mechanical)
10. Rotary Cup Oil
11. Others (specify)

2* USAGE CODES

1. Boiler, Steam
2. Boiler, Other (specify)
3. Air Heating for Space Heating
4. Air Heating for Process Usage
5. Others (specify)

FUEL BURNING EQUIPMENT

(FOR AGENCY USE ONLY)

Reference Number	Stack Parameters				Fuel Type	Fuel Data				
	Stack Height Feet	Inside Exit Dia. Feet	Exit Gas Velocity Feet/Sec.	Exit Gas Temperature Degree F.		Maximum Amount Per Hour (Specify Units)	Amount Per Year (Specify Units)	Heat Content BTU/Gal, etc. (Specify Units)	Percent Sulfur	Percent Ash
1	200	10	13.6	400	Spent Wood	7.1 Tons	61933 Tons	5120 BTU/lb.	Nil	7.1
					Purchased Wood	0.3 Tons	2211 Tons	6516 BTU/lb.	Nil	0.5
					Natural Gas	0.4 Tons	3762 Tons	21956 BUT/lb.	Nil	Nil
					By Products	0.1 Tons	833 Tons	12840 BTU/lb.	Nil	Nil
					Water	0.5 Tons	4668 Tons	604 BTU/lb.	Nil	Nil

FUEL SUPPLIERS:

Fuel Type	Supplier
Spent Wood	Hercules
Purchased Wood	Private Haulers
Natural Gas	Willmut Gas Co.
By Products	Hercules
Water	Hercules

(FOR AGENCY USE ONLY)

FUEL BURNING EQUIPMENT

11	12				13			
Reference Number	Air Pollution Control Equipment							Basis of Estimate
	Manufacturer and Model Number	Type* (Use Table 1)	Efficiency		Emissions (Tons/Year)			
			Design	Actual	Particulate	So_2	Other (specify)	
1	Fly Ash Arrestors (2)		92		302	Nil		Calc.

*For Wet Scrubber give
Gallons per minute Water
Flow and Water Pressure if known.

FOR ALL APPLICANTS

MANUFACTURING PROCESS OPERATIONS

Page 1

1. Company Name and Address, plus year for which information is given (if existing facility) at top of page. Use data for must recent calendar year available.

2. Reference Number. Use an identifying number for each manufacturing process which emits matter to the air and use the same number on all three pages of this form to identify information for the same operation.

3. Process or Unit Operation Name. Identify the unit or process section for which information is given by name.

4. Rates Process Capacity. Give in tons per hour the maximum rated capacity of the process or unit identified, wet weight.

5. Feed Input. Process rate in wet tons per hour and wet tons per year of materials fed to the operation.

6. Number of Emissions Points to Air. Number of stacks, vents, etc., which emit materials to air.

7. Product Output. Product rate in wet tons per hour and wet tons per year from the operation.

Page 2

8. Reference Number. Use same number as on Page 1 of form to identify information for same process or operation.

9. Stack Data (or outlet of air cleaning device)
   Stack Height in feet above groung.
   Stack Inside Diameter in Feet.
   Exit Gas Velocity in feet per second. (SCFM may be used if velocity is not known; specify units as SCFM if used)
   Exit Gas Temperature in degrees F.

10. Air Pollution Control Equipment.
    Manufacturer and Model Number. Nameplate Data.
    Type. Use Table 1, Page 16. If a wet scrubber, give water flow in GPM and water pressure.
    Collection efficiency. Design and actual collection efficiency if known.

11. Reference Number. Use same number as on Pages 1 & 2 of form to identify information for same process or operation.

12. Process Emissions. Give in pounds per hour and tons per year the amount of emissions from the process or operation of each of the two pollutant categories so that process rates versus emission rates may be compared with Regulations. Identify the units of measure used.
Give the basis of the estimates of pollutants emitted (stack tests, Material Balance, emission factors, ect.)

MANUFACTURING PROCESS OPERATIONS

Company Name	Address	FOR AGENCY USE
Hercules	West 7th Street Hattiesburg, MS 39401	

FACILITY NUMBER	Information for Calendar Year	Date
08/0/0 0/0/0/0/1 0/0/9	19 79	3/5/80

Reference Number	Process or Unit Operation Name	Rated Process Capacity Tons/Hour	Feed Input		Number of Emission Points To Air	Product Output*	
			Quantity Per Hour	Quantity Per Year		Quantity Per Hour	Quantity Per Year
	None						

*Specify Units of Measure Used

(FOR AGENCY USE ONLY)

MANUFACTURING PROCESS OPERATIONS

Reference Number	Stack Data				Air Pollution Control Equipment			
	Height Feet	Inside Unit Dia. Feet	Exit Gas Velocity Feet/Sec.	Exit Gas Temperature °F	Manufacturer and Model Number	Type* (use Table 1)	Collection Efficiency	
							Design	Actual

*For Wet Scrubbers Give Gallons per minute Water Flow and Water Pressure if known.

PAGE 3

(FOR AGENCY USE ONLY)

MANUFACTURING PROCESS OPERATIONS

11 12

Reference Number	Process Emissions*			Basis for Estimation	(Agency Comments Only)
	Particulates	Sulfur Oxides	Others (Specify by chemical composition)		

*Please Express Emissions as Tons per Year and Pounds per Hour and Identify Units Being Used.

FOR ALL APPLICANTS

REFUSE DISPOSAL AND INCINERATION

A. Company Name & Address plus year for which information is given if for renewal of permit, at top of page.

B. Type Waste. Describe type of waste materials (paper, garbage, wood crates, sawdust, coal refuse, etc.)

C. Maximum amount per day in pounds.

D. Average amount per year in tons.

D. Method of Disposal. Use codes at bottom of Form (1*).

Page 2

INCINERATION

1. Type of Incinerator. Check which applies.

2. Manufacturer, Model Number, Capacity in Pounds per Hour and type waste on which Capacity is based (Nameplate Data).

3. Average Quantity Burned in Pounds per Year.

4. Operating Schedule for Incinerator. Hours per Day and Days per Year incinerator is in operation.

5. Auxiliary Fuel Date.
   Type. (Natural Gas, #2 Oil, etc.)
   Amount per year. Specify Gallons, Cubic Foot, etc.
   Heat Content of Fuel. BTU per Gallon, Cubic Foot, etc.
   Percent Sulfur. Average Sulfur Content of Auxiliary Fuel.
   Percent Ash. Average Ash Content of Auxiliary Fuel.
   Fuel Supplier's Name if Ash and Sulfur Content are not known.

6. Pollution Control Eqipment on Incinerator.
   Manufacturer of Control Device.
   Model Number of control Device.
   Percent efficiency of Control if known.
   Type. Venturi Scrubber, Baghouse, etc. as outlined on other forms.
   GPM Water Flow if Control Device is a Wet Scrubber.

7. Stack Data.
   Height in Feet above Ground.
   Inside Exit Diameter in Feet.
   Exit Gas Velocity in Feet per Second.
   Exit Gas Volume if Velocity not known.
   Exit Gas Temperature in Degrees F if known.

8. Estimated Emission from Refuse Incineration. Give amounts in tons per year and basis of estimates for each of the five listed pollutants.

REFUSE DISPOSAL AND INCINERATION

A

Company Name	Information for Year	(Agency Use Only)
Hercules Inc.	1979	
Address	**Date**	
West 7th Street Hattiesburg, MS 39401	3/5/80	

B — Description of Waste Materials

Type (Describe)	C Maximum Amount Per Day (Pounds)	D Amount Per Year (Tons)	E Method of Disposal 1*
Ashes, Clinkers, Fly Ash	22502	4107	2

If Waste Disposal is by Incineration, Specify the Following:

1. Type of Incinerator:
   - single chamber ☐
   - multiple Chamber ☐
   - Modified (describe) ☐
   - Other (describe) ☐
   - Rotary ☐
   - Flue Fed ☐

2. Manufacturer's Name: _____
   Model Number _____
   Rated Capacity _____ Pounds / Hour _____ Type Waste
3. Quantity Burned: _____ Pounds / Day
   _____ Tons / Year
4. Operating Schedule _____ Hours / Day
   _____ Days / Year

*1 Disposal Method Codes

1. Open Burning
2. Landfill (No Burning)
3. Incinerator (Complete rest of Form)
4. Conical Burner (TeePee)
5. Burned in Boiler or Furnance
6. Other (Specify)

(AGENCY USE ONLY)

5. Auxiliary Fuel:
   - Type _____
   - Amount/Year (Specify Units) _____
   - Heat Content _____
   - Percent Sulfur _____
   - Percent Ash _____
   - Supplier's Name _____

6. Pollution Control Equipment:
   - Manufacturer _____
   - Model Number _____
   - % Efficiency _____
   - Type _____
   - GPM Water Flow (If Wet Scrubber) _____

7. Stack Data:
   - Height _____ Feet
   - Inside Exit Diameter _____ Feet
   - Exit Gas Velocity _____ Feet/Sec.
   - Exit Gas Volume _____ SCFM
   - Exit Gas Temp. _____ ^{o}F.

8. Estimated Emissions From Refuse Incineration:

Name:			Basis of Estimates:
Particulates	_____	Tons/Year	_____
Sulfur Oxides	_____	"	_____

ADDITIONAL INFORMATION REQUIRED FOR APPROVAL TO CONSTRUCT.

The following additional information must be submitted. Failure to submit any of the additional information or to conform to the instructions will result in initial denial of the application.

1. Site Plan – The drawing or sketch submitted must be to scale and show at least the following:

   A. The property involved and outlines and heights of all buildings. Identify property lines plainly.

   B. Location and identification of all existing or proposed points of discharge of air contaminant to the atmosphere.

   C. Location of streets and all adjacent properties. Show location of all buildings outside the property that are within 150 feet of the equipment involved in the application. Identify all such buildings (as a residence, apartment, warehouse, etc.), specifying number of stories. Indicate north, and prevailing wind direction.

II. Drawings of Equipment (See Note Below) - Supply an assembly drawing, dimensioned and to scale, in plan, elevation and as many sections as are needed to show clearly the design and operation of the equipment and the means by which air contaminants are controlled. The following must be shown:

   A. Size and shape of equipment. Show exterior and interior dimensions and features.

   B. Locations, sizes, and shape details of all features which may affect the production, collection, conveying or control of air contaminants of any kind; location, size and shape details concerning all materials handling equipment.

   C. All data and calculations used in selecting or designing the equipment.

   D. Horsepower rating of all motors driving the equipment.

   NOTE. Structural design calculations and details are not required.

ADDITIONAL INFORMATION MAY BE REQUIRED.

III. Description of Process and Control Equipment - The application must be accompanied by two copies of a written description of each process to be carried out in the facility and the function of the equipment used in the process. The descriptions must be complete and particular attention must be given to explaining all stages in the process where the discharge of any materials might contribute in any way to air pollution. Control procedures must be described insufficient detail to show the extent of control of air contaminants anticipated in the design, specifying the expected efficiency of the control devices. All obtainable data must be supplied concerning the nature, volumes, particle size, weights, chemical composition and concentrations of all types of air contaminants.

IV. Two copies of a block flow diagram showing the steps of the process and the flow of materials through the process and any control devices must be supplied.

NOTE: The application form, site plan, and equipment must be signed and stamped by an engineer registered in the State of Mississippi.

ADDITIONAL INFORMATION

I. Two copies of construction site plot plan.

II. Two copies of detailed equipment drawings.

III. Two copies of a detailed explanation of the process and control equipment.

IV. Two copies of a flow diagram of the process or operation showing control devices.

SIGNATURES: If for construction, the application must be submitted in duplicate and both copies signed and stamped by an engineer registered in the State of Mississippi, and signed by a duly authorized legal representative of the company who accepts the responsibility for the application. If for Existing Facility or Renewal of Permit to Operate, registered engineer's signature not required. All signatures and stamps must be originals on all copies, not photocopies.

Richard H. Heller

Signature of Engineer registered in Mississippi

Signature of person accepting responsibility for this application.

Typed name and Mississippi Registration Number

Richard H. Heller

Typed Name

Seal of Engineer Registered in Mississippi

TABLE 1

CODE NUMBERS FOR CONTROL DEVICES

Vapor Control Equipment

00 Group – CONTROL BY COMBUSTION

01 catalytic combustion
02 furnace combustion
03 boiler firebox
04 steam injection flare
05 venturi flare
06 direct flame combustion (afterburner)

10 Group – ADSORBERS

10 activated carbon – nonregenerative
11 activated carbon – regenerative
12 silica gel – nonregenerative
13 silica gel – regenerative
14 lithium chloride
15 activated alumina
16 activated bauxite

20 Goup – ABSORBERS

20 sieve plate tower
21 bubble-cap tower
22 packed tower

Particulate Matter –
Liquid Mist Control Equipment

30 Group – DRY SEPARATORS AND FILTERS

30 simple cyclones
31 high efficiency cyclones
32 settling chamber
33 simple filters
34 baghouse (shaking)
35 baghouse (reverse jet)
36 dry collector (dynamic)

40 Group – WET COLLECTORS

40 spray chamber – no baffles
41 spray chamber – with baffles
42 wet cyclones – rotoclone
43 wet dynamic precipitator
44 venturi scrubber
45 spray tower (not absorption – scrubbers)
46 packed tower (not absorption – scrubbers)
47 condensors (tube and shell); air
48 barometric condensor with hot wells

50 Group – ELECTRICAL PRECIPITATORS

50 single stage
51 double stage
52 precipitron

60 Group

60 Counteractant

70 Group – SPECIAL

71 Jet exhausters (air dilution)
72 Mist eliminators

80 Group – Other
Specify