



Mississippi Department of Environmental Quality  
Office of Pollution Control

I-sys 2000 Master Site Detail Report

Site Name: Hercules Inc

<p><b>PHYSICAL ADDRESS</b></p> <p>LINE 1: 613 West 7th Street</p> <p>LINE 2:</p> <p>LINE 3:</p> <p>MUNICIPALITY: Hattiesburg</p> <p>STATE CODE: MS</p> <p>ZIP CODE: 39401-</p> <p><b>MAILING ADDRESS</b></p> <p>LINE 1: 613 West 7th Street</p> <p>LINE 2:</p> <p>LINE 3:</p> <p>MUNICIPALITY: Hattiesburg</p> <p>STATE CODE: MS</p> <p>ZIP CODE: 39401-</p>	<p><b>OTHER INFORMATION</b></p> <p>MASTER ID: 002022</p> <p>COUNTY: Forrest</p> <p>REGION: SRO</p> <p>SIC 1: 2822</p> <p>AIR TYPE: TITLE V</p> <p>HW TYPE: LARGE QUANTITY</p> <p>SOLID TYPE:</p> <p>WATER TYPE: INDUSTRIAL</p> <p>BRANCH: Chemical</p> <p>ECED CONTACT: Yassin, Mohammad</p> <p>BASIN:</p>
<p><b>AIR PROGRAMS</b>   <input checked="" type="checkbox"/> SIP   <input type="checkbox"/> PSD   <input type="checkbox"/> NSPS   <input type="checkbox"/> NESHAPS   <input checked="" type="checkbox"/> MACT</p>	



**Mississippi Department of Environmental Quality  
Office of Pollution Control**

<b>Permits</b>				
PROGRAM	PERMIT TYPE	PERMIT #	MDEQ PERMIT CONTACT	ACTIVE
HAZ. WASTE	EPA ID	MSD008182081		NO
AIR	TITLE V	080000001	Ketchum, Brian	YES
AIR	SOP	080000001	Ketchum, Brian	NO
WATER	NPDES - MAJOR	MS0001830	Cook, Charles	NO
WATER	NPDES - MAJOR	MS0001830	Cook, Charles	NO
WATER	NPDES - MAJOR	MS0001830	Beasley, Jerry	YES
WATER	PRE-TREATMENT	MSP091286	Tomkins, Tracy	YES
GENERAL	SARA TITLE III	MSR110153	Lavallee, Louis	YES
AIR	TITLE V	0800-00001	Glenn, Montie	NO

<b>Compliance Actions</b>				
MEDIA	ACTIVITY TYPE	SCHEDULED	COMPLETED	INSPECTED B
WATER	CEI - NA	3/17/99	3/17/99	Yassin, Mohammad
WATER	CMI - PRETREATMENT	11/1/99		Sharp, Loyd
WATER	CMI - NPDES	4/1/00		Sharp, Loyd
WATER	CMI - NPDES	11/1/99		Sharp, Loyd
WATER	CEI - NA	9/30/00		Yassin, Mohammad
HAZ WASTE	Compliance Evaluation Inspection	9/30/00		Yassin, Mohammad
AIR	State Compliance Inspection	9/30/00		Yassin, Mohammad
HAZ WASTE	Compliance Evaluation Inspection	6/30/99	6/30/99	Yassin, Mohammad
AIR	State Compliance Inspection	6/29/99	6/29/99	Yassin, Mohammad
WATER	CEI - NA	6/30/99	6/30/99	Yassin, Mohammad

Forest

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC.

Date: DECEMBER 6, 1984

Address: P. O. BOX 1937

HATTIESBURG, MS.

Inspected By: HEIDI MOWERY *HM*

Person Contacted: HARRY POLK, RICHARD VANBECK

Facility No: 0800-00001

Is facility major or minor? MAJOR

Purpose of Inspection:

- |                          |                         |                                     |           |
|--------------------------|-------------------------|-------------------------------------|-----------|
| <input type="checkbox"/> | Compliance Verification | <input type="checkbox"/>            | O&M       |
| <input type="checkbox"/> | Performance Evaluation  | <input checked="" type="checkbox"/> | VEE       |
| <input type="checkbox"/> | Complaint Investigation | <input type="checkbox"/>            | Annual    |
| <input type="checkbox"/> | Surveillance            | <input type="checkbox"/>            | Follow-up |
| <input type="checkbox"/> | Other (Explain):        |                                     |           |

Current Permit Status: \_\_\_\_\_

Source Description: RESIN AND PIGMENT PRODUCTION FACILITY

Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: \_\_\_\_\_

State any permit conditions not being complied with and describe noncompliance:  
NONE, TO THE BEST OF MY KNOWLEDGE.



INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC.

Date: DECEMBER 6, 1984

Emission Point No./Name: #010 - BOILER #1

Rated Boiler Size: \_\_\_\_\_ MMBTUH

OR  
(35,000 WOOD) 100,000 lbs steam/hr @ 300 psig  
(60,000 NATURAL GAS)

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH

OR  
40,000 lbs steam/hr @ 270 psig

Fuel(s) Being Used:

- Natural Gas @ \_\_\_\_\_ MCFH
- Fuel Oil, No. \_\_\_\_\_ @ \_\_\_\_\_ Gal/hr
- Coal @ \_\_\_\_\_ tons/hr; \_\_\_\_\_ type; \_\_\_\_\_ % ash; \_\_\_\_\_ % sulfur
- Woodwaste:  Sawdust @ \_\_\_\_\_ tons/hr
- Shavings @ \_\_\_\_\_ tons/hr
- Hogged Fuel @ 5376 tons/hr AVG. (APPROX.
- Bark @ \_\_\_\_\_ tons/hr 12,000 TONS/MONTH)

Other Fuels, Explain: SCRAP RESINS AND RESIDUES ARE ALSO USED ON OCCASION.

For Solid Fuels, Describe Fuel Stoking Method: GRAVITY FEED

WITH FUEL HOUSE ON TOP AND DRAG CHAINS BELOW.

Soot Blowing:  Periodic  Manual  
 Continuous  Automatic

Schedule: ONCE PER SHIFT, (3 SHIFTS DAILY)

Air Pollution Controls:  None  Baghouse  
 Cyclone  ESP  
 Multiclone  
 Scrubber (For Particulate)

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 11 % By  VEE  CEM  
Sulfur Dioxide \_\_\_\_\_ lbs/MMBTU by CEM  
Nitrogen Oxides \_\_\_\_\_ lbs/MMBTU by CEM

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC.

Date: DECEMBER 6, 1984

Emission Point No./Name: #010 - BOILER #2

Rated Boiler Size: MMBTUH

OR 100,000 lbs steam/hr @ \_\_\_\_\_ psig

Operating Rate @ Insp: MMBTUH

OR 35,000 lbs steam/hr @ 270 psig

Fuel(s) Being Used:

- ( ) Natural Gas @ \_\_\_\_\_ MCFH
- ( ) Fuel Oil, No. \_\_\_\_\_ @ \_\_\_\_\_ Gal/hr
- ( ) Coal @ \_\_\_\_\_ tons/hr; \_\_\_\_\_ type; \_\_\_\_\_ % ash; \_\_\_\_\_ % sulfur
- ( X ) Woodwaste:
  - ( ) Sawdust @ \_\_\_\_\_ tons/hr
  - ( ) Shavings @ \_\_\_\_\_ tons/hr
  - ( X ) Hogged Fuel @ 5376 tons/hr AVG. (APPROX. 12,000 TONS/MONTH)
  - ( ) Bark @ \_\_\_\_\_ tons/hr

( ) Other Fuels, Explain: \_\_\_\_\_

For Solid Fuels, Describe Fuel Stoking Method: \_\_\_\_\_

Soot Blowing: ( X ) Periodic ( X ) Manual ( ) Continuous ( ) Automatic

Schedule: ONCE PER SHIFT (3 SHIFTS DAILY)

Air Pollution Controls: ( X ) None ( ) Baghouse ( ) Cyclone ( ) ESP ( ) Multiclone ( ) Scrubber (For Particulate)

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 11 % By ( X ) VEE ( ) CEM Sulfur Dioxide \_\_\_\_\_ lbs/MMBTU by CEM Nitrogen Oxides \_\_\_\_\_ lbs/MMBTU by CEM





Hercules, Inc.  
110--0800-00001  
Forrest County

Don Watts  
Inspection Report

On September 16, 1982, Dwight K. Wylie and I went to Hattiesburg to meet with Hercules concerning the complaints of high opacity and fallout from their woodwaste boilers. This trip also served as an annual inspection.

We met with Mr. H. R. Buckley, the plant manager; Charles Jordan, the environmental contact; and four other officials of Hercules. We discussed the reason for our visit and then proceeded to look at the boilers and Hercules' self-monitoring capability.

Hercules has opacity monitors in the duct work of each boiler. However, the opacity monitors do not read % opacity; they are set up to read according to Riengelman numbers. Also, the strip chart recorders do not work. If they did work, they would only show that the opacity is either less than 40% or greater than 40%; the chart cannot show the degree of opacity. Hercules does have a timer on each monitor: when the 40% level is exceeded, the timer goes on and stays on until the opacity goes below 40%. The timer is read at the start and end of each shift, giving the minutes the opacity exceeded 40% during each shift. Also, the monitors are calibrated at 0% and 100%, but nothing in between.

After reconvening in Mr. Buckley's office, we discussed our findings. The following items were agreed upon:

1. Hercules is to do one VE per day, Monday through Friday.
2. Hercules is to change their method of recording time out of compliance to show the exact time the non-compliance occurs and whether the boilers were being started up at the time.
3. The BPC will modify Hercules' permit to incorporate these conditions.

A letter is being sent to Hercules to get their comments before the permit is modified.

DW:hls





*Forrest*

Hercules, Inc.  
110-0800-00001  
Forrest County

Don Watts  
Inspection Report

On April 21, 1981, I visited the referenced facility and met with Mr. Charles Jordan. My primary concern on this trip was to follow-up on the SRO complaint investigation and clarify some of the information contained therein.

I approached the plant about 12:55 p.m. At that time there was no visible emissions from the North Stack, while the South Stack was exhibiting ~30% opacity. At 12:58 the North Stack began emitting 100% black smoke, which lasted until 1:03 p.m. After 1:03 p.m. the North Stack returned to no visible emissions and remained that way for the next hour that I was around. The opacity of the South Stack also dropped and remained in the 10-25% range.

Since the complaint we received contained both air and water complaints, and since the SRO report said the complainant lived next to Hercules' effluent ditch, I got Mr. Jordan to take me to their effluent stream. At the point where Hercules' effluent stream is no longer enclosed underground, several other waste water discharges have entered the stream. While this water did not look that good, I could not determine whether a problem existed. There was not a noticeable odor. However, the street next to this ditch is not the street that the complainant lives on. Evidently the SRO looked at the wrong ditch.

A letter is being sent to Mrs. Woods, the complainant, concerning the results of our inspection.

We will more closely observe the emissions from the woodwaste boilers at Hercules to ensure that compliance is being maintained.

DW:cm



7-15-82

HERCULES INCORPORATED  
HATTIESBURG, MS

ATTACHMENT I - STACK OPACITY DATA

Date	<u>Minutes Greater than 40% Opacity</u>					
	<u>April 1982</u>		<u>May 1982</u>		<u>June 1982</u>	
	<u>North</u>	<u>South</u>	<u>North</u>	<u>South</u>	<u>North</u>	<u>South</u>
1	2	2	1	6	2	2
2	0	5	0	1	2	4
3	0	2	3	5	7	3
4	0	2	29	4	2	0
5	1	2	5	3	3	0
6	6	3	2	5	1	3
7	32	9	1	2	3	1
8	25	19	1	0	17	19
9	2	3	0	0	3	4
10	8	25	10	6	7	2
11	3	10	1	0	7	9
12	10	5	13	0	5	0
13	9	14	3	17	6	5
14	11	17	1	1	39	5
15	14	17	14	23	0	6
16	2	6	3	5	7	2
17	2	9	7	2	2	6
18	22	19	0	0	1	21
19	9	4	7	2	0	0
20	31	11	3	8	0	0
21	14	13	4	22	Boilers	Boilers
22	14	18	4	0	DN	DN
23	13	11	4	7	DN	DN
24	1	6	3	0	DN	DN
25	0	5	3	4	DN	DN
26	0	19	0	66	DN	DN
27	1	4	5	2	DN	DN
28	18	8	0	7	DN	DN
29	19	9	5	40	DN	DN
30	7	3	0	0	11	18
31			3	1	7	43
Average % of Time	9 0.6	9 0.6	4 0.3	8 0.6	6 0.4	7 0.5

ATTACHMENT II - BUREAU V.E. READINGS

<u>Date</u>	<u>% Opacity</u>	
	<u>North</u>	<u>South</u>
6/30/82	10.4	28.8
5/03/82	5	9.4
4/27/82	5	9.4
3/18/82	5	24.8
1/26/82	27	5
1/19/82	5	24.8
12/17/81	15.8	13.9
11/30/81	31.7	23
8/10/81	5	20.3
7/28/81	2.4	13.4
Avg.	8.7	16.8



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: NOVEMBER 21, 1984

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On the above date a quarterly inspection of the referenced facility was conducted. The attached V.E.E. Records indicate compliance for the observation period with opacities of 13% and 16% for the north and south stacks, respectively.

Larry Polk informed me that boiler #4 should be on-line in the near future. Otherwise, all operations appeared satisfactory during my inspection.

Should further details be needed, please contact me.

HEIDI MOWERY *HM*



Forrest

**FILE COPY**

November 14, 1984

Mr. Charles Jordan  
Hercules Incorporated  
P. O. Box 1937  
Hattiesburg, Mississippi 39401

Dear Mr. Jordan:

Re: Facility No. 0800-00001  
Hattiesburg, Mississippi

We have received the monthly report on the boilers as required by your Permit to Operate. If any additional information is needed, we will contact you.

If you have any questions, please contact us.

Very truly yours,

Don Watts  
South Air Emissions Section

DW:els

Forest

PLANT UPSET AND EXCESSIVE EMISSIONS LOG

Date 10/4/84 Time 9:30 AM How Reported X Telephone  
Letter  
Visit

Facility Hercules

Location Hattiesburg

Contact Charles Jordan

Report Received By Don Watts

Plant/Process/Equipment Affected \_\_\_\_\_

Reasons for Upset Pipe ruptured in Herchlor Plant, spilling  
200-300 gallons of toluene

Effect on Emissions Toluene vapors emitted to neighborhood.

Time Upset Began: Date 10/4/84 Time ~8:15 AM

Time Upset Ended: Date \_\_\_\_\_ Time \_\_\_\_\_  
or

Estimated Time Upset Will End: Date \_\_\_\_\_ Time \_\_\_\_\_

Action Taken to Prevent Excessive Emissions: Toluene was contained  
into a sump, and is being recovered.

Comments/Other Info: Hercules received several calls  
from ~~city~~ people in the neighborhood. about  
odor.



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

**TO:** DON WATTS  
**FROM:** MARGARET HASE  
**SUBJECT:** HERCULES, INC. - FORREST COUNTY - 0800-00001  
**DATE:** SEPTEMBER 7, 1984

---

On the above date, Gray Carlisle and I went to Hercules, Inc. in Hattiesburg. V.E.E.'s were performed on both stacks. (see attached sheets).

We contacted Larry Polk at the facility. He informed us that boiler #4 is still down for repairs. No problems were noted during our inspection.

If you have any questions, please contact me.

*M Hase*

MARGARET HASE

*MH*



RECEIVED

1984 AUG 29 11 2: 58

MISSISSIPPI DEPARTMENT OF  
NATURAL RESOURCES  
BUREAU OF POLLUTION CONTROL

Hercules Incorporated  
West 7th Street  
P.O. Box 1937  
Hattiesburg, MS 39401  
(601) 545-3450

August 28, 1984

Department of Natural Resources  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209

Attention: Don Watts

Dear Mr. Watts:

PICCO RESINS REWORK MELTER

This letter is in response to our 8/27/84 phone conversation. Hercules proposes to install a 350 gallon "melting pot" to rework off-grade hydrocarbon resins. The off-grade resin (solid) will be melted (liquid) and blended with on-grade product. The source of heat for melting the resin will be steam coils in the bottom of the melter using existing available steam. I do not anticipate any emission problems and the melter is designed to rework up to 100,000 lbs./yr. of off-grade.

As we discussed, I trust this letter will satisfy your needs and exclude any requirements to obtain a permit to construct this piece of equipment.

If I can answer any additional questions please call me.

Very truly yours,

Charles S. Jordan  
Environmental Supervisor

CSJ:sw





RECEIVED

1984 AUG 23 11 08 32

MISSISSIPPI  
DEPARTMENT OF  
POLLUTION CONTROL

Hercules Incorporated  
West 7th Street  
P.O. Box 1937  
Hattiesburg, MS 39401  
(601) 545-3450

August 22, 1984

Mr. Don Watts  
Air Division  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209

Dear Mr. Watts:

In reference to operating Permit No. 0800-0001, please find the attached semi-annual report detailing all work done for emission point 021.

We will continue to submit this report on a semi-annual basis. Please excuse the delay in receiving this report.

Very truly yours,

Charles Jordan  
Environmental Supervisor

CSJ:sw

Attachments



## Interoffice Memc

cc: G. R. Yandle  
H. R. Buckley  
D. T. Smith  
E. C. Lindsay

Hattiesburg, Mississippi  
August 20, 1984

To: C. S. Jordan

From: Terrie L. Coughlin

Operating Permit No. 08000-0001 Hattiesburg, MS.

Re the above permit, Part III, other requirements, 4, the attached semi-annual report is submitted. This report is for January 1, 1984 through June 30, 1984.

TLC:m1  
0119Y

Assessment  
Of Emissions

	<u>Equip.</u>	<u>Days</u>	<u>Mat'ls.</u>	<u>Product</u>	<u>Pot. Emissions</u>		<u>Control Equip.</u>	<u>Type Vent</u>
<u>Kettle</u>								
A	8	Diethylene Glycol Dipropylene Glycol Polyester Terephthalate Zinc Oxide	Polyol	Water Ethylene Glycol Diethylene Glycol Dipropylene Glycol 1,4 - Dioxane	Total Condenser	No flow		
B	4	Rosin Fumaric Acid	Rosin	Water of Reaction	Total Condenser	No Flow		
C	19	Stearic Acid Ethylene Diamine Silicone	Amide	Water of Reaction	Total Condenser	No Flow		
D	19	Rosin Toluene Calcium Oxide Zinc Oxide	Resinate	Water of Reaction Toluene	Total Condenser	No Flow		
E	14	Diethylene Glycol Methyl para-formyl Benzoate Tyzor IPT	Polyol	Water Methanol Methyl Benzoate Methyl para-toluate Methyl para-formyl Benzoate	Total Condenser	No Flow		
F	5	Diethylene Glycol Dipropylene Glycol Polyester Terephthalate Zinc Oxide Terate 101 (B)	Polyol	Water Ethylene Glycol Diethylene Glycol Dipropylene Glycol 1,4 - Dioxane	Total Condenser	No Flow		
G	1	Rosin Telura Oil	Rosin	None	-	-		
<u>Reactors</u>								
A	9	Hydrocarbon Resin p-menthane H <sub>2</sub>	Hydrogenated Resin	Hydrogen	None	Hydrogen Purge		



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM



TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: AUGUST 16, 1984

---

On the above date a monthly V.E. Inspection was conducted at the referenced facility. The attached V.E.E. records demonstrate compliance for the observation period, with overall opacities of 5% from the North stack and 7% for the South stack.

Larry Polk informed me that boiler #4 was off-line for major repairs. New grates and firewalls are being installed and leaks are being located and sealed during this period. All other boilers were operational. No other problems were mentioned, and I could not detect such during my inspection.

If further details should be needed, please contact me.

HEIDI MOWERY *mf*



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM



TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: OCTOBER 10, 1984

---

A monthly V.E. Inspection was conducted at the referenced facility on the above date. The attached V.E.E. records demonstrate compliance for the observed period, with overall average opacities of 10% for both the North and South stacks.

Mr. Larry Polk informed me that Boiler #4 is still being repaired, but should be completed and back on-line soon. Otherwise, all operations were normal and no problems were noted during my inspection.

If you require any further details, please contact me.

HEIDI MOWERY

A handwritten signature in black ink, appearing to be "HM" or similar initials.

July 24, 1984

Mr. Charles Jordan  
Hercules Incorporated  
P. O. Box 1937  
Hattiesburg, Mississippi 39401

FORREST  
FILE COPY

Dear Mr. Jordan:

Re: Facility No. 0800-00001  
Hattiesburg, Mississippi

We have received the monthly report on the woodwaste boilers as required by your Permit to Operate. If any additional information is needed, we will contact you.

If you have any questions, please contact us.

Very truly yours,

Don Watts  
South Air Emissions Section

DW:cm



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

**TO:** DON WATTS  
**FROM:** HEIDI MOWERY  
**SUBJECT:** HERCULES, INC. - FORREST COUNTY - 0800-00001  
**DATE:** JULY 17, 1984

---

A monthly V.E. Inspection of the referenced facility was conducted on the above date. The attached V.E.E. records indicate compliance for the observed period, with average stack opacities of 8% and 7% for the North and South stacks, respectively.

No other problems were noted during my inspection other than the induced draft fan of boiler #1 being out, which has the unit off-line. All records appeared to be in order.

Should you require any further information, please contact me.

HEIDI MOWERY *mf*





Hercules Incorporated  
West 7th Street  
P.O. Box 1937  
Hattiesburg, MS 39401  
(601) 545-3450

June 27, 1984

Mr. Don Watts  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209

Dear Mr. Watts:

This is in reference to your June 21, 1984, letter addressing green smoke. We are not accustomed to ever seeing green smoke. During this period there was no change in the fuel or in the method of firing the boiler. We have no explanation as to why Ms. Heidi Mowery saw green smoke, but we will be on the alert for any smoke colorations in the future.

Very truly yours,

Charles Jordan  
Environmental Supervisor

CJ:bs

RECEIVED  
1984 JUN 28 11 49 33  
BUREAU OF POLLUTION CONTROL  
JACKSON, MISSISSIPPI



June 21, 1984

*Jordan*  
**FILE COPY**

Mr. Charles Jordan  
Hercules, Inc.  
P. O. Box 1937  
Hattiesburg, Mississippi 39401

Dear Mr. Jordan:

Re: Facility No. 0300-00001  
Hattiesburg, Mississippi

On June 8, 1984, visible emissions evaluations of the woodwaste boilers at your facility were performed by Ms. Heidi Mowery of our South Regional Office. The 18-minute average opacity for the North Stack was 16% while that for the South Stack was 10%; both stacks were, therefore, in compliance with the opacity limitations.

However, during the VEE on the North Stack, smoke with a green tint was observed. While the color of the smoke would not be significant in determining compliance with opacity limitations, it would indicate that there was some change in the fuel or in the method of firing the boiler. Please submit an explanation of the cause of the green tinted smoke by July 7, 1984.

If you have any questions, please contact us.

Very truly yours,

Don Watts  
South Air Emissions Section

DW:hdb



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: JUNE 8, 1984

The referenced facility was inspected on the above date. Copies of the V.E.E. record are attached; they show compliant performance levels of 16% and 10% for the North and South stacks respectively.

At one point during the V.E.E. an uncharacteristic greenish smoke began to be emitted from the North stack, continuing for the rest of the V.E.E. and afterward. In Larry Polk's absence, Charles Jordan was contacted, but he could offer no information as to the nature or cause of this emission. Otherwise, all boiler functions appeared to be normal during my inspection.

If any further information is needed, please contact me.

HEIDI MOWERY

A handwritten signature in black ink, appearing to be "HEIDI MOWERY", written over the typed name.





MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171

*Forest*



M E M O R A N D U M

TO: File  
FROM: Jesse Thompson, Jr.  
SUBJECT: Stack Test at Hercules in Hattiesburg, Mississippi  
#110-0800-00001  
DATE: June 6, 1984

On May 22, 1984, Method 5 sampling was conducted at Hercules of Hattiesburg. The testing was performed by Danny Russell of EML. The testing began at 8:56 a.m., and was finished at 12:54 p.m. I recommend that the test be accepted.

JTjr:hdb





MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: MAY 24, 1984

A monthly V.E. Inspection was conducted on the above date at the referenced facility. The attached V.E.E. records demonstrate compliant levels of 24% and 7% for the North and South stacks, respectively.

Mr. Polk, whom I contacted, told me that there were some problems with boiler #4 and that it became necessary to take it off-line and bring boiler #1 on line. This may account for the high emissions.

If you should need further information, please contact me.

*heidi mowery*  
HEIDI MOWERY  
*mf*



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

**TO:** DON WATTS  
**FROM:** HEIDI MOWERY  
**SUBJECT:** HERCULES, INC. - FORREST COUNTY - 0800-00001  
**DATE:** FEBRUARY 22, 1984

On the above date, a V.E. Inspection was conducted at the referenced facility. Larry Polk was contacted.

As may be seen from the enclosed V.E.E. records, the opacities for both stacks were 14% (North) and 5% (South). However, I was later informed that the boilers on the south stack were already shut down. No problems were evident during my inspection.

Should you require anything further, please call.

*heidi mowery*  
HEIDI MOWERY





RECEIVED

1984 MAY -2 AM 9:55

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
BUREAU OF POLLUTION CONTROL

Hercules Incorporated  
West 7th Street  
P.O. Box 1937  
Hattiesburg, MS 39401  
(601) 545-3450

April 30, 1984

Mr. Don Watts  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, MS 39209

Dear Mr. Watts:

This letter is in response to your April 18, 1984 letter to Mr. H. R. Buckley and our subsequent phone conversation on April 23, 1984.

As discussed, we feel that the data in the first deficiency noted in your letter is being recorded. Since you indicated that you will be present for the May 8, 1984 stack testing, we would like to show you our log sheets which does contain this data. We believe this will satisfy your concern.

With regard to the opacity data which you indicated we were not submitting, please reference our August 29, 1984 letter where we requested that such data not be incorporated into our new permit. We interpreted that this request was granted since opacity data information was not included in the Part II, Other Requirements, of our current permit (See attached copy of page 34 of our current air emission permit). We believe we are complying with all points listed in our current permit.

In reference to your third deficiency, we have obtained Environmental Monitoring Laboratories Inc. to perform stack testing starting May 8, 1984.

We are looking forward to meeting with you May 8th and resolving these points of interest.

Very truly yours,

Charles S. Jordan  
Environmental Supervisor

CSJ:ps  
0220N

PART III

Page 34 of 35  
Permit No. 0800-00001

PART III  
OTHER REQUIREMENTS

(1) For Emission Points 009 and 010, the following conditions shall apply:

- A. The permittee shall perform a daily visible emissions evaluation on each stack, Monday through Friday. Each evaluation shall consist of three sets of six-minute readings with readings being made at 15 second intervals over the six-minute period for a total reading time of 18 minutes. These data shall be maintained on hand for review by Bureau personnel upon request.
- B. The permittee shall maintain a boiler operation log book in the boiler control room. The log book shall include the operational status of each boiler, including start-ups and grate cleanings for the period. The log book shall be maintained on hand for review by Bureau personnel upon request.
- C. The permittee shall submit a monthly report detailing the compliance status of the boilers. The report shall include copies of all visible emissions evaluations in which any reading exceeds 40% opacity.
- D. The permittee shall demonstrate compliance of each boiler by stack sampling once per year during the months of March - May. The boilers shall be fired with woodwaste representative of that listed in the application for permit renewal. The Bureau should be notified at least 15 days prior to the test to ensure the availability of a test observer. A report of the stack test results shall be submitted within 30 days of completion of the testing.

(2) For Emission Points 009, 010, and 011, 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 expiration of this Permit to Operate.

Operation of this facility at higher sulfur dioxide emission levels than in 1970 after expiration of this permit 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.

PART III  
OTHER REQUIREMENTS

- (3) For Emission Point 012, the following additional condition will also apply:

Records of the operation of this 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.

- (4) For Emission Point 021, the following condition shall apply.

Since this unit is used for experimental purposes and emissions may change depending on the conditions of the experiments, reports shall be made to the Mississippi Bureau of Pollution Control semi-annually beginning July 1, 1983, 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.

- (5) For Emission Point 036, 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 off, estimated repair time, and action taken to preclude a recurrence.

- (6) 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.





MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



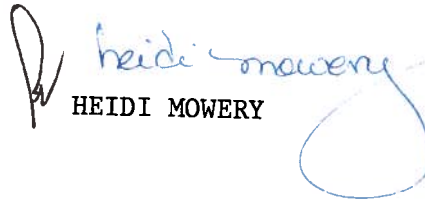
MEMORANDUM

**TO:** DON WATTS  
**FROM:** HEIDI MOWERY  
**SUBJECT:** HERCULES, INC. - FORREST COUNTY - 0800-00001  
**DATE:** APRIL 25, 1984

On the above date, a monthly V.E. Inspection was performed at the referenced facility. The attached V.E.E. record demonstrates compliant opacity levels of 17% for the North stack and 14% for the South stack.

Although odors were somewhat strong downwind from the plant, no operational problems were apparent or brought to my attention by Charlie Jordan, with whom I met afterwards. We also discussed the discrepancies in the permit stipulations with which they were told they were not complying. It appears that they have overlooked an up-dating of their permit since the date of issuance. I will look forward to hearing from you regarding this matter.

If further information should be needed, please contact me.

  
HEIDI MOWERY



April 18, 1984

**FILE COPY**  
*Forest*

Mr. H. R. Buckley  
Hercules Incorporated  
P. O. Box 1937  
Hattiesburg, Mississippi 39401

Dear Mr. Buckley:

Re: Operating Permit No. 0800-00001  
Hattiesburg, Mississippi

As you are aware, your Operating Permit contains additional requirements for Emission Points 009 and 010, the woodwaste boilers. These requirements are found on page 34 of 35 of your Operating Permit. Hercules has not fulfilled either the requirements contained in the Operating Permit or the agreements made between the Bureau and Hercules personnel prior to the issuance of the Operating Permit. These deficiencies are listed below:

1. Part III, (1) B. requires Hercules to maintain a log book in the boiler control room. The log book is to include the operational status of each boiler, including start-ups and grate cleanings. Also, in a letter dated August 29, 1983, from Mr. Charles Jordan, Hercules committed to maintain opacity data as described in the Bureau's June 24, 1983, letter. Copies of these letters are enclosed for your convenience. From our South Regional Office inspections, we feel that this information is not being recorded as Hercules had agreed. Please see that this situation is corrected immediately.
2. Part III, (1) C. requires the submittal of a monthly report. Again, Hercules has agreed to provide information as described in our June 24, 1983, letter. This information is not being supplied. Also, during the month of February there were four 18-minute opacity exceedences, two of which were during grate cleanings. Additionally, there were six six-minute opacity exceedences during grate cleanings and eight six-minute opacity exceedences during normal operations. Please note that these are violations of APC-S-1 and the permit. This pattern is repeated in each of the previous monthly reports.
3. Part III, (1) D. requires the permittee to demonstrate compliance during the months of March-May. We have not been contacted regarding a proposed test date. The stack tests should be scheduled as soon as possible.

We expect these deficiencies to be corrected immediately, and the proper information should be submitted for the month of April, 1984.

---

Mr. H. R. Buckley  
Hercules Incorporated  
April 18, 1984  
Page -2-

If you have any questions, please contact us.

Very truly yours,

Don Watts  
South Air Emissions Section

DW:cm  
Enclosure



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES  
Bureau of Pollution Control  
P. O. Box 10385  
Jackson, Mississippi 39209  
(601) 961-5171



MEMORANDUM

TO: DON WATTS  
FROM: HEIDI MOWERY  
SUBJECT: HERCULES, INC. - FORREST COUNTY - 0800-00001  
DATE: MARCH 8, 1984

A V.E. Inspection of the referenced facility was made on the above date. The attached V.E.E. records demonstrates an opacity level for the north stack that is only just within compliance standards, at an average of 39% for the time period. There are a number of excessive emissions recorded, including some 100% readings. These intermittent excursions continued for a least one hour after the V.E.E. The south stack demonstrated an overall average of 5% for the same time period.

Larry Polk, whom I contacted at the plant, could offer no specific reasons for these readings. A review of the days' boiler operators log was insufficient, with recordings for only a few of the excursions and for much shorter durations than I witnessed. Once again, I find these logs to be totally inappropriate as a factual record of Hercules' operations of their woodwaste boilers. They are neither accurate nor complete. If they are being submitted as records, then they are useless. I submit that Hercules, Inc., is in need of equipment that will accurately monitor their boiler stack emissions, such as are utilized at other large facilities. A continuous monitor and a 6-minute averaging monitor would be most beneficial both to them and our agency.

If you need any further information, please contact me.

HEIDI MOWERY *hm*





Hercules Incorporated  
West 7th Street  
P.O. Box 1937  
Hattiesburg, MS 39401  
(601) 545-3450

February 13, 1984

Mississippi Bureau of Pollution Control  
P. O. Box 10385  
Jackson, MS 39209

Attn: Mr. Donald Watts

Gentlemen:

FACILITY PERMIT NO. 08000-0001-021-PILOT PLANT

As required by Part III, Requirement No. 4, the attachment summarizes our Pilot Plant work from July 1, 1983 thru December 31, 1983. We will continue to submit the required documentation on a semi-annual basis.

Yours very truly,

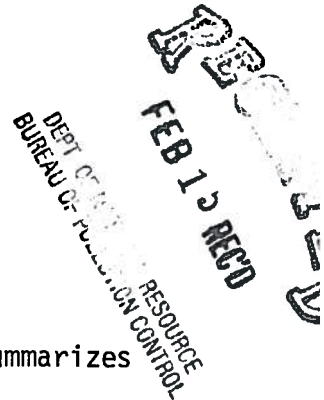
HERCULES INCORPORATED

Charles S. Jordan  
Environmental Coordinator

CSJ:sw

Attachment

cc: W. M. Broom, Org. BC/11431 NE  
D. J. Keilman, Opn. 2942 SW  
H. R. Buckley  
D. T. Smith  
E. C. Linsay  
T. Coughlin





## Interoffice Mem

cc: D. T. Smith, Jr.  
E. C. Lindsay

Hattiesburg, MS  
January 30, 1984

TO: C. S. Jordan

FROM: T. Lucy Coughlin

OPERATING PERMIT NO. 08000-0001 HATTIESBURG, MS

Re the above referenced permit, Part III, other requirements, 4, the attached semi-annual report is submitted. This report is for July 1, 1983 through December 31, 1983.

TLC:rp

Attachment

*T. Lucy Coughlin*

Experimental Equipment Name	Duration of Test (Days)	Raw Materials Used	Type of Product Produced	Assessment of Emissions					
				Potential Emissions	Control Equipment	Type Vent			
Kettle	A	Rosin Fumaric Acid	Rosin	Water of Reaction	Total Condenser	No flow			
B	1	Diethylene Glycol Methyl para-formyl Benzoate Tyzor TPP	Polyol	Water Methanol Methyl Benzoate Methyl para-toluate Methyl para-formyl Benzoate	Total Condenser	No flow			
C	14	Stearic Acid Ethylene Diamine Silicone	Amide	Water of Reaction	Total Condenser	No flow			
D	3	Propylene Glycol Dimethyl Terephthalate Residue Tyzor TPP	Polyol	Methanol Water	Total Condenser	No flow			
Reactors									
A	2	Rosin H <sub>2</sub>	Hydrogenated Resin	Hydrogen	None	Hydrogen P.			
B	12	Rosin H <sub>2</sub>	Hydrogenated Resin	Hydrogen	"	"			
C	34	Hydrocarbon Resin p-Menthane H <sub>2</sub>	Hydrogenated Resin	Hydrogen	"	"			
D	30	Hydrocarbon Resin p-Menthane H <sub>2</sub>	Hydrogenated Resin	Hydrogen	"	"			

# FILE COPY

## M E M O R A N D U M

TO: Wayne Anderson  
FROM: Don Watts  
SUBJECT: Hercules, Inc.  
110-0800-00001  
Forrest County  
Monthly Report for December, 1983  
DATE: January 23, 1984

Hercules has submitted a "monthly report" according to the requirements of its Permit to Operate. However, the report consists merely of 13 sets of visible emissions evaluations. Of the 13 sets, there are seven (7) six-minute averages which exceed 40%, and one day when the eighteen-minute average exceeds 40% (58.3%). No explanation is given for the excess emissions, which are outlined below.

<u>DATE</u>	<u>STACK</u>	<u>6-MIN. AVERAGE</u>	<u>18-MIN. AVERAGE</u>
12/09	North	41.7%	31%
12/15	North	41.04%	28.1%
12/16	North	54.2%	34.4%
12/22	North	51.7%	39.2%
12/27	South	75.4%, 60.4%, 69.2%	58.3%

The "monthly report" does not contain enough information or the type information that we were expecting. I recommend that we discuss this matter with Dwight, and then send Hercules a letter indicating the type information we want in future reports.

DW:hdb