

Forest

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC.

Date: 10-9-85

Address: WEST 7TH STREET

P. O. BOX 1937

HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001

Is facility major or minor? MAJOR

Purpose of Inspection:

- |  |   |
|--|---|
| <input type="checkbox"/> Compliance Verification | <input checked="" 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: PTO EXPIRES MAY 1; 1986.

Source Description: PINE RESINS MANUFACTURING 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 non compliance:

NONE, TO MY KNOWLEDGE.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 10-9-85

Emission Point No./Name: \_\_\_\_\_

Description of Process: \_\_\_\_\_

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS & PIGMENTS/LIGHT OILS AND RESIDUES

Emissions & Control Devices: 4 WOODWASTE BOILERS WITH TWO STACKS;

NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 10-9-85

Emission Point No./Name: 004/BOILER #4

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
34,000 lbs steam/hr @ 285 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 @ 5000 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: ONCE/SHIFT, 3 TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 6 % By ( X ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC.

Date: 10-9-85

Emission Point No./Name: 005/BOILER #5

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

OR

100,000 lbs steam/hr @ 300 psig

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

OR

50,000 lbs steam/hr @ 285 psig

Fuel(s) Being Used:

- ( X ) Natural Gas @ 2000 ~~MMBTU~~ MCFD  
( ) Fuel Oil, No. \_\_\_\_\_ @ \_\_\_\_\_ Gal/hr  
( ) Coal @ \_\_\_\_\_ tons/hr; \_\_\_\_\_ type; \_\_\_\_\_ % ash; \_\_\_\_\_ % sulfur  
( ) Woodwaste: ( ) Sawdust @ \_\_\_\_\_ tons/hr  
( ) Shavings @ \_\_\_\_\_ tons/hr  
( ) Hogged Fuel @ \_\_\_\_\_ tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: ONCE/SHIFT, 3 TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 0 % By ( ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

Forest

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 11-22-85

Address: WEST 7TH STREET

P. O. BOX 1937

HATTIESBURG, MS. 39401

Inspected By: DETRICH B. ALLEN *DA*

Person Contacted: RICHARD VANBECK

Facility No: 110-0800-00001

Is facility major or minor? MAJOR

Purpose of Inspection:

- ( ) Compliance Verification
  - ( ) Performance Evaluation
  - ( ) Complaint Investigation
  - ( ) Surveillance
  - ( ) Other (Explain): \_\_\_\_\_
- (X) O&M
  - (X) VEE
  - ( ) Annual
  - ( ) Follow-up

Current Permit Status: PTO EXPIRES <sup>SEP</sup> ~~MAY~~ 1; 1986.

Source Description: PINE RESINS MANUFACTURING 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 MY KNOWLEDGE.



INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 11-22-85

Emission Point No./Name: \_\_\_\_\_

Description of Process: \_\_\_\_\_

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES

Emissions & Control Devices: 4 WOODWASTE BOILERS WITH TWO STACKS; NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 11-22-85

Emission Point No./Name: 003/BOILER #3

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
30,000 lbs steam/hr @ 285 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 @ 5200 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: ONCE/SHIFT, 3 TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 12 % By (X) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC.

Date: 11-22-85

Emission Point No./Name: 005/BOILER #5

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

OR

100,000 lbs steam/hr @ 300 psig

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

OR

42,000 lbs steam/hr @ 285 psig

NOT

Fuel(s) Being Used:

- Natural Gas @ AVAILABLE \_\_\_\_\_ MCFD
- Fuel Oil, No. \_\_\_\_\_ @ \_\_\_\_\_ Gal/hr
- Coal @ \_\_\_\_\_ tons/hr; \_\_\_\_\_ type; \_\_\_\_\_ % ash; \_\_\_\_\_ % sulfur
- Woodwaste:
  - Sawdust @ \_\_\_\_\_ tons/hr
  - Shavings @ \_\_\_\_\_ tons/hr
  - Hogged Fuel @ \_\_\_\_\_ tons/hr
  - Bark @ \_\_\_\_\_ tons/hr

Other Fuels, Explain: \_\_\_\_\_

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

Soot Blowing:  Periodic  Manual  
 Continuous  Automatic

Schedule: ONCE/SHIFT, 3 TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 0 % By  VEE  CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM



*Jordan*

INSPECTION REPORT FORM - GENERAL

Facility Name: Hercules Incorporated

Date: December 18, 1985

Address: West 7th Street  
Hattiesburg, Mississippi

Inspected By: Don Watts



Person Contacted: Charles Jordan

Facility Number: 110-0800-00001

Is Facility Major or Minor: Major

Purpose of Inspection:

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

Current Permit Status: PTO expires September 1, 1986.

Source Description:

Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: APC-S-1

State any permit conditions not being complied with and describe noncompliance:

None.

The Hard Resin Area (Emission Point 015) which is currently under a PEP was not in operation. Construction of the new Gas-fired Boiler (Emission Point 037) is almost complete.

DW:els

INSPECTION REPORT FORM - BOILERS

Facility Name: Hercules Incorporated

Date: December 18, 1985

Emission Point No./Name: 010/Boiler No. 4

Rated Boiler Size:          MMBTUH

OR

100,000 lbs steam/hr @          psig

Operating Rate @ Insp:          MMBTUH

OR

32,000 lbs steam/hr @          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  
                  ( ) Hogged Fuel @          tons/hr  
                  ( ) Bark @          tons/hr

( ) Other Fuels, Explain:

For Solid Fuels, Describe Fuel Stoking Method:

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

Schedule: Grates cleaned once per shift.

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 7.1 % By (X) VEE ( ) CEM  
Sulfur Dioxide          lbs/MMBTU by CEM  
Nitrogen Oxides          lbs/MMBTU by CEM

DW:els

*Forest*

INSPECTION REPORT FORM - GENERAL

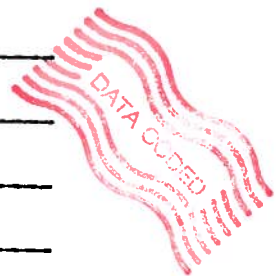
Facility Name: HERCULES, INC. Date: 9-16-85

Address: WEST 7TH STREET  
P. O. BOX 1937  
HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001



Is facility major or minor? MAJOR

Purpose of Inspection:

- Compliance Verification
  - Performance Evaluation
  - Complaint Investigation
  - Surveillance
  - Other (Explain): \_\_\_\_\_
- O&M
  - VEE
  - Annual
  - Follow-up

Current Permit Status: PTO EXPIRES MAY 1, 1986.

Source Description: PINE RESINS MANUFACTURING 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 MY KNOWLEDGE.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 9-16-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS & PIGMENTS/LIGHT OILS & RESIDUES

Emissions & Control Devices: 4 WOODWASTE BOILERS WITH TWO STACKS;

NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.



*Forest*

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 8-28-85

Address: WEST 7TH STREET  
P. O. BOX 1937  
HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001



Is facility major or minor? MAJOR

Purpose of Inspection:

- Compliance Verification
  - Performance Evaluation
  - Complaint Investigation
  - Surveillance
  - Other (Explain): \_\_\_\_\_
- O&M
  - VEE
  - Annual
  - Follow-up

Current Permit Status: PTO EXPIRES MAY 1, 1986.

Source Description: PINE RESINS MANUFACTURING 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 MY KNOWLEDGE.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 8-28-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES.

Emissions & Control Devices: FOUR WOODWASTE BOILERS WITH 2 STACKS;

NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 8-28-85

Emission Point No./Name: 004/BOILER #4

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
30,000 lbs steam/hr @ 285 psig

Fuel(s) Being Used: ( X ) 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 @ 5600 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: ONCE/SHIFT, 3 TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 6 % By ( X ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

NOTE: BOILERS #1 AND #2 HAVE BEEN TAKEN OFF-LINE, AS OF AUGUST 19, 1985 DUE TO FUEL SWITCH-OVER TO NATURAL GAS. BOILER #3 IS OFF-LINE WITH ECONOMIZER TUBE LEAK, AND IS BEING REPAIRED; #3 WILL COME BACK ON-LINE AFTER REPAIRS ARE COMPLETED. ALL BOILERS WILL BECOME GAS-BURNING UNITS AS OF OCTOBER OR NOVEMBER.





*Forest*

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC.

Date: 7-10-85

Address: WEST 7TH STREET

P. O. BOX 1937

HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VANBECK

Facility No: 110-0800-00001

Is facility major or minor? MAJOR



Purpose of Inspection:

- |                          |                         |                                     |           |
|--------------------------|-------------------------|-------------------------------------|-----------|
| <input type="checkbox"/> | Compliance Verification | <input checked="" 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: PTO EXPIRES OCTOBER 1, 1986.

Source Description: PINE RESINS MANUFACTURING 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 MY KNOWLEDGE.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC. Date: 7-10-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES.

Emissions & Control Devices: FOUR WOODWASTE BOILERS WITH TWO EMISSION

STACKS; NO CONTROLS.  
(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 7-10-85

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

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
40,000 lbs steam/hr @ 285 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 @ 3800 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

( X ) Other Fuels, Explain: SCRAP RESINS MIXED IN WITH WOOD FUEL.

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

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

Schedule: ONCE PER SHIFT, THREE SHIFTS DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 8 % By ( X ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 7-10-85

Emission Point No./Name: 009/BOILER #4

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
25,000 lbs steam/hr @ 285 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 @ 3800 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

(X) Other Fuels, Explain: SCRAP RESINS AND RESIDUES MIXED WITH WOOD FUEL.

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

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

Schedule: ONCE PER SHIFT, THREE 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 N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

Don W.

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 6-20-85

Address: WEST 7TH AVENUE

P. O. BOX 1937

HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VANBECK

Facility No: 110-0800-00001

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: PTO EXPIRES OCTOBER 1, 1986.

Source Description: PINE RESINS MANUFACTURING 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

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INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC. Date: 6-20-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESUDUES

Emissions & Control Devices: FOUR WOODWASTE BOILERS WITH TWO EMISSION  
STACKS; NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_







INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 6-20-85

Emission Point No./Name: 011/BOILER #5

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
28,000 lbs steam/hr @ 285 psig

Fuel(s) Being Used: ( X ) Natural Gas @ \_\_\_\_\_ MCFH  
( ) Fuel Oil, No. \_\_\_\_\_ @ \_\_\_\_\_ Gal/hr  
( ) Coal @ \_\_\_\_\_ tons/hr; \_\_\_\_\_ type; \_\_\_\_\_ %  
ash; \_\_\_\_\_ % sulfur  
( ) Woodwaste: ( ) Sawdust @ \_\_\_\_\_ tons/hr  
( ) Shavings @ \_\_\_\_\_ tons/hr  
( ) Hogged Fuel @ \_\_\_\_\_ tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: \_\_\_\_\_

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity N/A % By ( ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM

DON W.

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 5-22-85

Address: WEST 7TH AVENUE

P. O. BOX 1937

HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VANBECK

Facility No: 110-0800-00001

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: PTO EXPIRES OCTOBER 1, 1986.

Source Description: PINE RESINS MANUFACTURING 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 MY KNOWLEDGE.



INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 5-22-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES.

Emissions & Control Devices: FOUR WOODWASTE BOILERS WITH TWO EMISSION

STACKS; NO CONTROL DEVICES.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.







*Forrest*

INSPECTION REPORT FORM - GENERAL

Facility Name: Hercules Incorporated                      Date: May 1, 1985

Address: West 7th Street  
          Hattiesburg, Mississippi 39401

Inspected By: Don Watts

Person Contacted: Charles Jordan

Facility Number: 110-0800-00001

Is Facility Major or Minor: Major

Purpose of Inspection:

- Compliance Verification                       O&M
- Performance Evaluation                       VEE
- Complaint Investigation                       Annual
- Surveillance                                     Follow-Up
- Other, Explain Stack Test Observation

Current Permit Status: Permit to Operate expires September 1, 1986

Source Description: Pine rosins and resins manufacturing facility

Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: APC-S-1

State any permit conditions not being complied with and describe noncompliance:

None





As required by PART III, No. 1, of the Operating Permit, stack testing of the woodwaste boilers at Hercules was being performed by Environmental Monitoring Laboratories (Danny Russell & Harry Little). This is the second of three annual tests required by the Permit.

The pertinent details of the testing are summarized below:

<u>Boiler No.</u>	<u>Date</u>	<u>Run No.</u>	<u>Start</u>	<u>Stop</u>	<u>Leak Check, cfm</u>	<u>Steam Production, #/hr</u>	
4	4/30	See Jesse Thompson's memo.					
3	4/30	1	2:38 pm	3:43 pm	.003 (ok)	--*	
	5/1	2	8:53 am	9:54 am	.011 (ok)	--*	
		3	10:07 am	11:08 am	.005 (ok)	30,000	
1	5/1	1	11:44 am	12:45 pm	.008 (ok)	25,000	
		2	1:12 pm	2:13 pm	.009 (ok)	24,000	
		3	2:34 pm	3:37 pm	.004 (ok)	12,000	
2	Postponed because Boiler down for refractory repairs.						

\*These runs were not observed.

A 4x6 matrix was used, i.e., 24 points, with 2.5 minutes/point. All data appeared to be recorded properly, and sampling was done in accordance with Reference Methods 1-5. Proper clean-up procedures were employed. A Fyrite gas analysis was conducted during each run.

Boilers No. 1 and 2 vent through the South Stack (Emission Point 009), while Boilers No. 3 and 4 vent through the North Stack (Emission Point 010).

The opacity of the North Stack during Run 3 of the test on Boiler No. 3 was 5-10%. The opacity of the South Stack was 5-10% during the entire sampling period. A VEE (attached) was done from 1:41 pm to 1:59 pm; the average opacities were 7.9%, 5.4%, and 5.6%.

Grate cleaning occurred from 9-9:45 am on Boiler No. 3 and began at 3:25 pm on Boiler No. 1.

A mixture of chips and sawdust was being fed to the boilers as fuel. The steam production strip charts were not inking, so steam flow was read by me 2-3 times during each run.

No problems were noted during the sampling; therefore, the resultant report should provide a valid representation of the boiler emissions.

DW:cm

Don W.

Forest

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 4-9-85

Address: P. O. BOX 1937  
WEST 7TH AVENUE  
HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *HM*

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001

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: PTO EXPIRES SEPTEMBER 1, 1986.

Source Description: WOOD RESINS 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: \_\_\_\_\_

NOTE: ALL SMOKE ALARMS HAVE BEEN OUT FOR ONE WEEK, AND THEY HAVE  
BEEN RELYING ON THE CAMERA MONITORS IN THE CONTROL ROOM.



INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 4-9-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES.

Emissions & Control Devices: FOUR (4) WOODWASTE BOILERS WITH TWO (2)

EMISSION STACKS; NO CONTROL DEVICES.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE







Don W.

Forest

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 3-22-85

Address: P. O. BOX 1937

WEST 7TH AVENUE

HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001

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: PTO EXPIRES SEPTEMBER 1, 1986

Source Description: WOOD RESINS PRODUCTION FACILITY

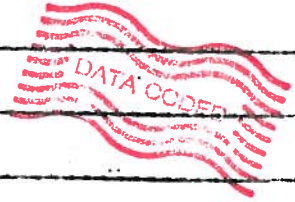
Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: APC-S-1

State any permit conditions not being complied with and describe noncompliance:

NONE, TO MY KNOWLEDGE.



INSPECTION REPORT FORM - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC.

Date: 3-22-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS AND RESIDUES

Emissions & Control Devices: FOUR (4) WOODWASTE BOILERS WITH TWO (2)

EMISSION STACKS; NO CONTROL DEVICES.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO MY KNOWLEDGE.











INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 2-22-85

Address: P. O. BOX 1937  
WEST 7TH STREET  
HATTIESBURG, MS. 39401

Inspected By: HEIDI MOWERY *DM*

Person Contacted: RICHARD VAN BEEK

Facility No: 110-0800-00001

Is facility major or minor? MAJOR

Purpose of Inspection:

- |                          |                         |                                     |           |
|--------------------------|-------------------------|-------------------------------------|-----------|
| <input type="checkbox"/> | Compliance Verification | <input type="checkbox"/>            | OM        |
| <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: PTO EXPIRES SEPTEMBER 1, 1986.

Source Description: WOOD RESINS PRODUCTION FACILITY.

Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: APC-S-1

State any permit conditions not being complied with and describe noncompliance:

NONE, TO MY KNOWLEDGE.

PLEASE NOTE, HOWEVER, THAT THE EMISSION POINT NUMBERS THE HERCULES

PERSONNEL HAS BEEN USING ON THEIR DAILY VEE REPORTS ARE THE REVERSE

OF OURS.







INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 2-22-85

Emission Point No./Name: 010/BOILER #3

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
38,000 lbs steam/hr @ 285 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 @ 7 tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: ONCE PER SHIFT, THREE TIMES DAILY.

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 13 % By ( X ) VEE ( ) CEM  
Sulfur Dioxide N/A lbs/MMBTU by CEM  
Nitrogen Oxides N/A lbs/MMBTU by CEM



INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC.

Date: 2-22-85

Emission Point No./Name: 010/BOILER #4

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

OR  
100,000 lbs steam/hr @ 300 psig

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

OR  
\* \_\_\_\_\_ lbs steam/hr @ \_\_\_\_\_ 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  
( ) Hogged Fuel @ \_\_\_\_\_ tons/hr  
( ) Bark @ \_\_\_\_\_ tons/hr

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

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

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

Schedule: \_\_\_\_\_

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

Complete Appropriate Control Device Sheets

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

\*#4 BOILER IS OFF-LINE TO REPAIR SOME REFRACTORY MATERIAL THAT FELL OUT OF THE TOP OF THE FIREBOX; REPAIRS SHOULD BE COMPLETED BY THE END OF THIS DAY AND #4 WILL BE PUT BACK ON-LINE THEN.

*Jonest*

INSPECTION REPORT FORM - GENERAL

Facility Name: Hercules Incorporated

Date: January 29, 1985

Address: West 7th Street  
Hattiesburg, Mississippi

Inspected By: Don Watts

Person Contacted: Richard Van Beek

Facility Number: 110-0800-00001

Is Facility Major or Minor: Major

Purpose of Inspection:

- |   |   |
|---|---|
| <input checked="" 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: Operating Permit expires September 1, 1986.

Source Description: Wood Resins Production Facility

Applicable Regulations:

- SIP
- PSD
- NSPS
- NESHAPS

Cite regulation by description or regulatory section number: APC-S-1

State any permit conditions not being complied with and describe noncompliance:

Opacity exceedance from North Stack (Boiler <sup>#34#4</sup>#1) is a violation of APC-S-1, Section 3.1 and 3.2, as referenced in the Operating Permit. Also, opacity information was not recorded on the daily boiler log sheet as required by Part III of the Operating Permit.



Hercules Incorporated  
110-0800-00001

1/29/85 INSPECTION REPORT

The primary purpose of this inspection was to perform VEE's of the woodwaste boilers. The VEE's were done from outside the plant property prior to entering the plant. Results of the VEE's are discussed below for each stack. At about 11:30 a.m., I entered the plant. Mr. Charles Jordan, the Environmental Supervisor, could not be found, so I went to lunch from 11:50 - 12:30. Mr. Jordan still could not be found, so at about 1:00 p.m., I met with Mr. Richard Van Beek, who is the area supervisor for the boilers and several other areas. While talking with him, I learned that Heidi Mowery of the SRO had been in the plant doing a VEE at approximately the same time I had. Her report will be reviewed upon its receipt.

South Stack - Emission Point <sup>009</sup>~~040~~ - Boilers <sup>1 & 2</sup>~~3 & 4~~

Three sets of six-minute readings were performed. The average opacities were 8, 19, and 25%. See Attachment 1. Opacity was consistent during the entire time I was in the area and observing the plant. According to the strip chart in the control room, Boiler #3 was producing 50,000 #/hour of steam and Boiler #4 was producing 35,000 #/hour of steam during the time of the VEE.

North Stack - Emission Point <sup>010</sup>~~009~~ - Boilers <sup>3 & 4</sup>~~1 & 2~~

High opacity was observed from the North Stack for approximately 40 minutes prior to beginning the VEE. (Part of this time was while passing by Hercules on the way to Mississippi Power - Plant Eaton and part of it was while doing the VEE on the South Stack.) Six sets of six-minute readings were performed. The average opacities were 79, 69, 94, 79, 53, and 56%. See Attachment 2. Opacities of 40% or greater continued for several minutes after the conclusion of the VEE's.

Boiler #2 was not in operation, while Boiler #1 was shown as having the grates cleaned from 9:55 to 11:35 a.m. The steam output strip chart recorder was not inking so it was not possible to determine the steam output during the VEE's. At 1:00, Boiler #1 had a steam output of 55,000 #/hour. (The opacity at this time was less than 40%.) According to Mr. Van Beek, wet sawdust was being used as fuel during the time VEE's were done. There were no opacity exceedances recorded on the boiler compliance status log sheet. Also, there was no mention of the wet sawdust being used.

This is a definite violation of the regulations. While the regulations allow exceedances for 15 minutes due to start-up, Hercules had 36 minutes of documented exceedances.

DW:hdb

INSPECTION REPORT FORM - GENERAL

Facility Name: HERCULES, INC. Date: 1-4-85

Address: P. O. BOX 1937  
HATTIESBURG, MS.

Inspected By: HEIDI MOWERY *Hm*

Person Contacted: LARRY POLK

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 - MISCELLANEOUS PROCESSES

Facility Name: HERCULES, INC. Date: 1-4-85

Emission Point No./Name: \_\_\_\_\_

Description of Process:

Raw Materials: RESINS, ADDITIVES

Processing Operations: HYDROGENATION, STEARIFICATION

Products/ByProducts: RESINS AND PIGMENTS/LIGHT OILS

Emissions & Control Devices: 4 WOODWASTE BOILERS WITH 2 EMISSION STACKS/

NO CONTROLS.

(Complete Appropriate Control Device Sheets)

Permit conditions not being complied with and description of noncompliance:

NONE, TO THE BEST OF MY KNOWLEDGE.



INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 1-4-85

Emission Point No./Name: 010  
009/BOILER #4

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
\_\_\_\_\_ lbs steam/hr @ \_\_\_\_\_ 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 @ \_\_\_\_\_ tons/hr  
( ) 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, THREE TIMES DAILY

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

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity 10 % By (X) VEE ( ) CEM  
Sulfur Dioxide \_\_\_\_\_ lbs/MMBTU by CEM  
Nitrogen Oxides \_\_\_\_\_ lbs/MMBTU by CEM

NOTE: LEAK IN ECONOMIZER TUBE AFTER INDUCED-DRAFT FAN RE-INSTALLED;  
SHOULD BE BACK ON-LINE 1-6-85.





INSPECTION REPORT FORM - BOILERS

Facility Name: HERCULES, INC. Date: 1-4-85

Emission Point No./Name: 509  
010/BOILER #2

Rated Boiler Size: \_\_\_\_\_ MMBTUH  
OR  
100,000 lbs steam/hr @ 300 psig

Operating Rate @ Insp: \_\_\_\_\_ MMBTUH  
OR  
31,937 lbs steam/hr @ 285 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 @ App. 5000 tons/hr  
( ) 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, THREE TIMES DAILY

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

Complete Appropriate Control Device Sheets

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

STO - 21.74 in. Hg. HERCULES  
 Tstd = 68°F = 528°R 0800-00001

BOILER No. 1

Particulate Test Calculation Review (Method 5)

	RUN 1	RUN 2	RUN 3
$T_s$ : Avg. stack temp; °R	823.6		
$T_m$ : Avg. meter temp; °R	556.3		
$\Delta H$ : Avg. orifice pressure drop; in. H <sub>2</sub> O	1.1396		
$Y$ : Dry gas meter calibration factor; dimensionless	1.0		
$P_{bar}$ : Barometric pressure; in. Hg	30.16		
$V_m$ : Sample volume (volume metered) at meter conditions; ft <sup>3</sup>	33.018		
$V_{mstd}$ : Dry gas volume, corrected to std. conditions; dscf $= V_m Y (T_{std}/T_m) [(P_{bar} + (\Delta H/13.6))/P_{std}]$ (correct for leak if leak rate exceeds allowable) See Meth. 5, 6.3, if applicable	31.68		
$V_{lc}$ : Vol. of water collected; ml	69.0		
$V_{wstd}$ : Vol. of water vapor at std. conditions; scf $= (V_{lc}) (.00267) (T_{std}/P_{std})$	3.251		
$B_{ws}$ : Moisture content; dimensionless $(V_{wstd}) / (V_{mstd} + V_{wstd})$	0.093		
$1 - B_{ws}$ : Dry gas fraction	0.907		
$C_p$ : Pitot tube coefficient; dimensionless check for proper design or calibration (see 4.1.3 Meth. 2)	0.84		
$(\sqrt{\Delta P})_{avg}$ : Average square root of $\Delta P$ $(\sum \sqrt{\Delta P})/n$ [where n = no. of points]	0.7673		
$P_s$ : Stack pressure; in. Hg $= P_{bar} + \text{static pressure (in. Hg)}$	30.13		
$M_d$ : Dry molecular wt. of stack gas; lb/lb mole $= 29.0 \text{ or } (\% CO_2)(.44) + (\% O_2)(.32) + (\% N_2 + CO)(.28)$	29.32		
$M_s$ : Wet molecular wt. of stack gas; lb/lb mole $= (M_d) / (1 - B_{ws}) * (18 B_{ws})$	28.267		
$V_s$ : Gas velocity; ft/sec. $35.49 (C_p) (\sqrt{\Delta P})_{avg} \sqrt{T_s / (P_s M_s)}$	54.19		
$Q_s$ : Volumetric flow rate; dscf/hr $3600 (1 - B_{ws}) (V_s) (A) (T_{std}/T_s) (P_s/P_{std})$	2,438,515		
$W_a$ : Acetone wash blank; mg See Meth. 5 6.6 and 6.7 if applicable			
$M_n$ : Particulate sample wt.; mg filter, wash, blank correction	64.0		
$C_b$ : Particulate concentration; grains/dscf $= (0.0154 \text{ gr/mg}) (M_n / V_{mstd})$	0.031		
Conversion to appropriate units: $\# C_s Q_s = \#/hr$	10.84		
$I$ : Isokinetic variation: $= 100 T_s [(.002669) (V_{lc}) + (V_m/T_m) (P_{bar} + \Delta H/13.6)]$ $600 V_s P_s A_n$	97.8		

STW - 01.10 M.H.  
 $T_{std} = 68^{\circ}F = 528^{\circ}R$

BOILER No. 2

HERCULES  
 0800-00001

Particulate Test Calculation Review (Method 5)

	RUN 1	RUN 2	RUN 3
$T_s$ : Avg. stack temp; °R		842	
$T_m$ : Avg. meter temp; °R		554.6	
$\Delta H$ : Avg. orifice pressure drop; in. H <sub>2</sub> O		1.435	
$Y$ : Dry gas meter calibration factor; dimensionless		1.0	
$P_{bar}$ : Barometric pressure; in. Hg		30.18	
$V_m$ : Sample volume (volume metered) at meter conditions; ft <sup>3</sup>		36.686	
$V_{mstd}$ : Dry gas volume, corrected to std. conditions; dscf $= V_m Y (T_{std}/T_m) [(P_{bar} + (\Delta H/13.6))/P_{std}]$ (correct for leak if leak rate exceeds allowable) See Meth. 5, 6.3, if applicable		35.35	
$V_{lc}$ : Vol. of water collected; ml		87	
$V_{wstd}$ : Vol. of water vapor at std. conditions; scf $= (V_{lc}) (.00267) (T_{std}/P_{std})$		4.1	
$B_{ws}$ : Moisture content; dimensionless $(V_{wstd}) / (V_{mstd} + V_{wstd})$		0.104	
$1 - B_{ws}$ : Dry gas fraction		0.896	
$C_p$ : Pitot tube coefficient; dimensionless check for proper design or calibration (see 4.1.3 Meth. 2)		0.84	
$(\sqrt{\Delta P})$ avg: Average square root of $\Delta P$ $(\sum \sqrt{\Delta P}) / n$ [where n = no. of points]		0.8649	
$P_s$ : Stack pressure; in. Hg $= P_{bar} + \text{static pressure (in. Hg)}$		30.15	
$M_d$ : Dry molecular wt. of stack gas; lb/lb mole $= 29.0 \text{ or } (\% CO_2)(.44) + (\% O_2)(.32) + (\% N_2 + Cu)(.28)$		29.52	
$M_s$ : Wet molecular wt. of stack gas; lb/lb mole $= (M_d) (1 - B_{ws}) (18 B_{ws})$		28.32	
$V_s$ : Avg. stack gas velocity; ft/sec. $= (85.49) (C_p) (\sqrt{\Delta P}) \text{ avg. } \sqrt{T_s / (P_s M_s)}$		61.68	
$Q_s$ : Volumetric flow rate; dscf/hr $3600 (1 - B_{ws}) (V_s) (A) (T_{std}/T_s) (P_s/P_{std})$		26837.61	
$W_a$ : Acetone wash blank; mg See Meth. 5 6.6 and 6.7 if applicable		0	
$M_n$ : Particulate sample wt.; mg filter, wash, blank correction		158.2	
$C_s$ : Particulate concentration; grains/dscf $= (0.0154 \text{ gr/mg}) (M_n / V_{mstd})$		0.07	
Conversion to appropriate units: $C_s Q_s (\# / 7000 \text{ gr}) = \# / \text{hr}$		26.42	
$I$ : Isokinetic variation: $= 100 T_s [ (.002669) (V_{lc}) + (V_n / T_m) (P_{bar} + \Delta H / 13.6) ]$ $600 V_s P_s A_n$		99.18	

Tstd = 68°F = 528°R

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Boiler No. 3

Particulate Test Calculation Review (Method 5)

	RUN 1	RUN 2	RUN 3
T <sub>s</sub> : Avg. stack temp; °R			
T <sub>m</sub> : Avg. meter temp; °R			836.7
ΔH : Avg. orifice pressure drop; in. H <sub>2</sub> O			552.7
Y : Dry gas meter calibration factor; dimensionless			1.475
P <sub>bar</sub> : Barometric pressure; in. Hg			1.0
V <sub>m</sub> : Sample volume (volume metered) at meter conditions; ft <sup>3</sup>			30.16
V <sub>mstd</sub> : Dry gas volume, corrected to std. conditions; dscf = V <sub>m</sub> Y (T <sub>std</sub> /T <sub>m</sub> ) [(P <sub>bar</sub> + (ΔH/13.6))/P <sub>std</sub> ] (correct for leak if leak rate exceeds allowable) See Meth. 5, 6.3, if applicable			36.561
V <sub>lc</sub> : Vol. of water collected; ml			94
V <sub>wstd</sub> : Vol. of water vapor at std. conditions; scf = (V <sub>lc</sub> ) (.00267) (T <sub>std</sub> /P <sub>std</sub> ) .04712			4.43
B <sub>ws</sub> : Moisture content; dimensionless (V <sub>wstd</sub> ) / (V <sub>mstd</sub> + V <sub>wstd</sub> )			0.111
1 - B <sub>ws</sub> : Dry gas fraction			0.889
C <sub>p</sub> : Pitot tube coefficient; dimensionless check for proper design or calibration (see 4.1.3 Meth. 2)			0.84
(√ΔP) avg: Average square root of ΔP (Σ√ΔP)/n [where n = no. of points]			0.8653
P <sub>s</sub> : Stack pressure; in. Hg = P <sub>bar</sub> + static pressure (in. Hg)			30.14
M <sub>d</sub> : Dry molecular wt. of stack gas; lb/lb mole = 29.0 or (% CO <sub>2</sub> )(.44) + (% O <sub>2</sub> )(.32) + (% N <sub>2</sub> + Cu)(.28)			29.3
M <sub>s</sub> : Wet molecular wt. of stack gas; lb/lb mole = (M <sub>d</sub> )(1 - B <sub>ws</sub> ) + (18B <sub>ws</sub> )			28.05
V <sub>s</sub> : Avg. stack gas velocity; ft/sec. = (85.49)(C <sub>p</sub> )(√ΔP) avg. √(T <sub>s</sub> /P <sub>s</sub> M <sub>s</sub> )			61.82
Q <sub>s</sub> : Volumetric flow rate; dscf/hr 3600 (1 - B <sub>ws</sub> )(V <sub>s</sub> )(A)(T <sub>std</sub> /T <sub>s</sub> )(P <sub>s</sub> /P <sub>std</sub> )			2684852
W <sub>a</sub> : Acetone wash blank; mg See Meth. 5 6.6 and 6.7 if applicable			—
M <sub>n</sub> : Particulate sample wt.; mg filter, wash, blank correction			96.9
C <sub>s</sub> : Particulate concentration; grains/dscf = (0.0154 gr/mg)(M <sub>n</sub> /V <sub>mstd</sub> )			0.04
Conversion to appropriate units: C <sub>s</sub> Q <sub>s</sub> (#/1000gr) = #/hr			15.34
I : Isokinetic variation: = 100 T <sub>s</sub> [(0.002669)(V <sub>lc</sub> ) + (V <sub>m</sub> /T <sub>m</sub> )(P <sub>bar</sub> + ΔH/13.6)] 600 V <sub>s</sub> P <sub>s</sub> A <sub>n</sub> RCLD			99.14

STD = 68°F = 528°R

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BOILER No. 4

Particulate Test Calculation Review (Method 5)

	RUN 1	RUN 2	RUN 3
$T_s$ : Avg. stack temp; °R		847.83	
$T_m$ : Avg. meter temp; °R		563.40	
$\Delta H$ : Avg. orifice pressure drop; in. H <sub>2</sub> O		1.422	
$Y$ : Dry gas meter calibration factor; dimensionless		1.0	
$P_{bar}$ : Barometric pressure; in. Hg		30.24	
$V_m$ : Sample volume (volume metered) at meter conditions; ft <sup>3</sup>		37.628	
$V_{mstd}$ : Dry gas volume, corrected to std. conditions; dscf = $V_m Y (T_{std}/T_m) [(P_{bar} + (\Delta H/13.6))/P_{std}]$ (correct for leak if leak rate exceeds allowable) See Meth. 5, 6.3, if applicable		35.76	
$V_{lc}$ : Vol. of water collected; ml		89.5	
$V_{wstd}$ : Vol. of water vapor at std. conditions; scf = $(V_{lc}) (.00267) (T_{std}/P_{std})$		4.22	
$B_{ws}$ : Moisture content; dimensionless $(V_{wstd}) / (V_{mstd} + V_{wstd})$		0.106	
$1 - B_{ws}$ : Dry gas fraction		0.894	
$C_p$ : Pitot tube coefficient; dimensionless check for proper design or calibration (see 4.1.3 Meth. 2)		0.84	
$(\sqrt{\Delta P})$ avg: Average square root of $\Delta P$ $(\sum \sqrt{\Delta P}) / n$ [where n = no. of points]		0.8731	
$P_s$ : Stack pressure; in. Hg = $P_{bar} +$ static pressure (in. Hg)		30.18	
$M_d$ : Dry molecular wt. of stack gas; lb/lb mole = 29.0 or $(\% CO_2)(.44) + (\% O_2)(.32) + (\% N_2 + CW)(.28)$		29.56	
$M_s$ : Wet molecular wt. of stack gas; lb/lb mole = $(M_d) (1 - B_{ws}) (18 B_{ws})$		28.33	
$V_s$ : Avg. stack gas velocity; ft/sec. = $(85.49) (C_p) (\sqrt{\Delta P})$ avg. $\sqrt{T_s / (P_s M_s)}$		62.44	
$Q_s$ : Volumetric flow rate; dscf/hr $3600 (1 - B_{ws}) (V_s) (A) (T_{std}/T_s) (P_s/P_{std})$		2694803	
$W_a$ : Acetone wash blank; mg See Meth. 5 6.6 and 6.7 if applicable		—	
$M_n$ : Particulate sample wt.; mg filter, wash, blank correction		304.4	
$C_s$ : Particulate concentration; grains/dscf = $(0.0154 \text{ gr/mg}) (M_n / V_{mstd})$		0.13	
Conversion to appropriate units: $C_s Q_s (\#/1000 \text{ gr}) = \#/hr$		50.47	
$I$ : Isokinetic variation: = $100 T_s [(0.002669) (V_{lc}) + (V_m/T_m) (P_{bar} + \Delta H/13.6)]$ $600 V_s P_s A_n$		99.87	