Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

October 18, 1996

Ms. Margarete M. Vest
Georgia/Pacific Corporation
Environmental Engineering
Palatka, Florida 32177-3867

Subject: Hawthorne Plywood Plant
Permits Required for Changes to Presses

Dear Ms. Vest:

Thank you for supplying information on emission increases associated with installation and modifications to the presses at the Hawthorne plant. The permits issued for press modifications made in 1985 and 1987 were appropriate. The determination made during that time period that PSD requirements did not apply to those modifications will not be overturned. This decision may have been different had these modifications occurred after EPA's guidance in the 1990 NSR Workshop Manual that debottlenecking emissions increases are counted for PSD applicability. The Department currently uses the NSR Workshop Manual as a guide to implementation of the PSD requirements.

The Bureau has determined that the Hawthorne plywood plant is a major PSD source due to carbon monoxide(CO) emissions from the bark boiler. Any future modifications which result in emission increases above the significance emission rates in Table 212.400-2 F.A.C., will trigger PSD requirements. EPA's determination that the plant was minor for CO emissions was based on inaccurate projected emissions supplied by Georgia/Pacific circa 1979. The Department is currently reviewing the circumstances of the original PSD determination.

If you have any additional questions, please contact me at 904/488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/mc

cc: Christopher Kirts, NED
Brian Beals, EPA

DRAFT

October 17, 1996

Ms. Margarete M. Vest
Georgia/Pacific Corporation
Environmental Engineering
Palatka, Florida 32177-3867

Subject: Hawthorne Plywood Plant
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The Bureau has determined that the Hawthorne plywood plant is a major PSD source due to carbon monoxide emissions from the bark boiler. Any future modifications that result in emission increases above the significant emission rates in Table 212.400-2 F.A.C., will trigger PSD requirements. EPA's determination that the plant was minor for CO emissions was based on inaccurate projected emissions supplied by Georgia/Pacific circa 1979. The Department is hereby requesting that EPA revisit their determination based on more accurate emission factors or require Georgia/Pacific to conduct emission tests for CO.

I would like this

If you have any additional questions, please contact me at 904/488-1344.

Do we really want to say this

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/mc

cc: Christopher Kirts, NED
Brian Beals, EPA

The recommendation made at the Sandestin workshop was to ask Region 4.

old Draft

Brian Beals

September 9, 1996

~~Jewell Harper~~, Chief
~~Air Enforcement Branch~~ Preconstruction - Hazardous Air Pollution Section
EPA Region 4
~~100 Alabama Street, SW~~
Atlanta, Georgia 30303

Subject: PSD Applicability of Georgia Pacific's Hawthorne Plywood facility based on CO and VOC emissions

Dear Ms. Harper:

On September 6, 1996 Georgia Pacific representatives Lawrence Otwell, Gordon Alphonso, Vernon Adams, Margarete Vest, and Tobin Finley met with DEP staff to discuss permit requirements for the above referenced facility. Lawrence Otwell stated that EPA determined in the late 1970's that PSD did not apply to the Hawthorne facility. He stated that the company has never conducted emissions testing on the bark boiler with more accuracy than Orsat analysis. He stated that the most representative emissions estimates available to G-P at the time of construction permitting were AP-42 emission factors. G-P representatives at the meeting agreed that the plywood manufacturing process has not changed at this facility in a manner which has changed emissions of CO from the bark boiler. Since permitting, the AP-42 emission factor for CO from bark boilers has been revised twice, and the latest AP-42 emission factor indicates that emissions of CO are greater than 250 tpy for the bark boiler. It is likely that CO emissions at the time of original permitting exceeded 250 tpy. At this time, uncontrolled VOC emissions are also known to exceed 250 tpy from the three veneer dryers but the July 18, 1996 Consent Decree requires a 90 percent reduction in these emissions, which in all likelihood would be BACT.

Since Region 4 originally determined that the Hawthorne facility was minor for CO and other PSD pollutants, and current information indicates that emissions of CO emissions from the bark boiler exceed 250 tpy, the Department requests guidance on whether to issue an after-the-fact PSD permit for this facility.

Sincerely,

C.
~~Clair~~ H. Fancy, Chief
Bureau of Air Regulation

CHF/mc

cc: Lawrence Otwell

Florida Department of
Environmental Protection

Memorandum

TO: Christopher Kirts, District Air Program Administrator
Northeast District

FROM: Clair H. Fancy, Chief
Bureau of Air Regulation

DATE: September 9, 1996

SUBJECT: Georgia-Pacific Plywood Plant, Hawthorne, Florida

On September 6, we met with representatives of Georgia-Pacific regarding their project to control VOC emissions from their veneer dryers at their plywood plant in Hawthorne, Florida.

According to Georgia-Pacific, it is not feasible to treat emissions from the glue application and pressing operations simultaneously with emissions from veneer drying. This is due to the relatively large volume of VOC in low concentration emanating from the presses compared to the relatively small volume of high concentration evolved from the dryers. The control projects would be separate whether or not PSD review is applicable to this plant.

The Bureau of Air Regulation has determined that the District should review the construction permit application for the installation of the control equipment on the three existing veneer dryers in accordance with the consent order between Georgia-Pacific and EPA dated July 18, 1996. The consent decree provisions are also applicable requirements which should be considered when reviewing their Title V permit application.

The Bureau has also determined that the plant is a major PSD source with respect to any future projects. Any additional modifications resulting in emissions increases above the significance levels (e.g. 40 TPY of VOC, 25 TPY of PM, 100 TPY of CO) should be reviewed by this Bureau as PSD projects.

CHF/h

cc: Doug Neely, USEPA
Jewell Harper, USEPA
Tobin E. Finley, Georgia-Pacific
Lawrence Otwell, Georgia-Pacific
Pat Comer, DEP OGC

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA, Plaintiff, V. GEORGIA-PACIFIC CORPORATION, Defendant	)	CIVIL ACTION NO.

CONSENT DECREE

XC: Jim P
8/14

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA, Plaintiff, V. GEORGIA-PACIFIC CORPORATION, Defendant	)	CIVIL ACTION NO.

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America (hereinafter "Plaintiff" or "the United States"), on behalf of the United States Environmental Protection Agency (herein, "EPA") has filed a Complaint alleging that Defendant, Georgia-Pacific Corporation (herein, "G-P" or "Defendant") commenced construction of major emitting facilities and major modifications of major emitting facilities in violation of the Prevention of Significant Deterioration ("PSD") requirements at Part C of the Clean Air Act (the "Act"), 42 U.S.C. §§ 7470-7492, and the regulations promulgated thereunder at 40 C.F.R. § 52.21 (the "PSD Rules");

WHEREAS, Plaintiff further alleged that Defendant commenced construction of emitting facilities or modified emitting facilities without first obtaining the appropriate preconstruction permits required by the State Implementation Plans ("SIPs") approved pursuant to 42 U.S.C. § 7410;

WHEREAS, Plaintiff further alleged that Defendant failed to properly provide information to state and Federal regulatory agencies concerning potential air emissions from Defendant's facilities;

WHEREAS, EPA issued Notices of Violation with respect to such allegations to the Defendant on August 5, 1994 and May 18, 1995 (the "NOVs");

WHEREAS, the Defendant has denied and continues to deny the violations alleged in the NOVs and the Complaint;

WHEREAS, the United States and the Defendant have agreed that settlement of this action is in the best interest of the parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the United States and the Defendant have consented to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, and without any admission of the violations alleged in the Complaint or Notices of Violation, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. The Complaint states a claim upon which relief can be granted against the Defendant under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court has jurisdiction of the subject matter herein and over the

parties consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477. The Defendant does not admit and furthermore reserves its rights to contest the jurisdiction of this Court over, and to award relief for, subject matters or activities not expressly covered or required by this Consent Decree. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c). The Parties agree that nothing in this Consent Decree nor the fact that it is being entered into shall constitute any admission of fact or conclusion of law.

II. APPLICABILITY

2. The provisions of this Consent Decree shall apply to and be binding upon the United States and upon the Defendant as well as the Defendant's officers, employees, agents, successors and assigns. In the event Defendant proposes to sell or transfer any of its real property or operations subject to this Consent Decree, it shall advise in writing to such proposed purchaser or successor-in-interest of the existence of this Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA before such sale or transfer, if possible, but no later than the closing date of such sale or transfer. The Defendant shall provide a copy of this Consent Decree to the vendor(s) supplying the VOC control technology systems required by Part IV of this Consent Decree.

III. FACTUAL BACKGROUND

3. Defendant owns and operates the following plywood facilities in the United States:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Cedar Springs, Georgia (no longer in operation)
Madison, Georgia
Monticello, Georgia
Warm Springs, Georgia
Gloster, Mississippi
Louisville, Mississippi
Taylorsville, Mississippi
Dudley, North Carolina
Whiteville, North Carolina
Prosperity, South Carolina
Russellville, South Carolina
Emporia, Virginia

4. Defendant owns and operates a medium density fiberboard ("MDF") facility in Holly Hill, South Carolina.

5. Defendant owns and operates the following particleboard facilities in the United States:

Martell, California
Vienna, Georgia
Gaylord, Michigan
Oxford, Mississippi
Taylorsville, Mississippi
Louisville, Mississippi
Russellville, South Carolina
South Boston, Virginia

6. Defendant owns and operates the following oriented strand board ("OSB") facilities in the United States:

Woodland, Maine
Dudley, North Carolina
Grenada, Mississippi
Skippers, Virginia

7. The United States issued the NOVs to G-P alleging that G-P failed to properly document and identify to the appropriate permitting authorities potential emissions increases associated with the facilities identified in paragraphs 3 through 6.

IV. COMPLIANCE PROGRAM

A. PLYWOOD PLANTS

8. G-P shall obtain PSD or federally enforceable state minor source permits, based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in these permits) and Paragraph 11, for plywood dryers at the following ten plywood plants at issue in this case:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Madison, Georgia
Monticello, Georgia
Dudley, North Carolina
Louisville, Mississippi
Taylorsville, Mississippi

9. G-P shall obtain a federally enforceable minor source permit based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in the permit) and Paragraph 11 for dryers at the Skippers, Virginia OSB plant.

10. G-P shall install improved pollution control technology systems for control of volatile organic compounds ("VOCs") consisting of Regenerative Thermal Oxidation ("RTO"), Regenerative Catalytic Oxidation ("RCO") or other EPA-approved equivalent control technology systems ("control technology systems") on "hot zone" exhausts of the veneer dryers at the plants identified in Paragraph 8 and on the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P will specify in orders placed with equipment vendors that these controls have the design capacity for at least 95% destruction of VOCs.

11. G-P shall capture all VOC emissions from "hot zone" stacks of the veneer dryers and minimize fugitive emissions from dryer doors (through appropriate operation and maintenance procedures) and the "green end" of dryers (through proper balancing of "hot zone" exhausts) at the plants identified in Paragraph 8, and shall capture all VOC emissions from the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P shall achieve a minimum destruction efficiency of 90% for the captured VOC emissions at all dryers at the plants identified in Paragraphs 8 and 9 as demonstrated by compliance with the requirements of Parts IV.A. and IV.C. The 90% destruction efficiency need not be maintained during periods when the dryer(s) are not operating or during previously scheduled startup and shutdown periods (including bakeouts and washouts), and Force Majeure events (including malfunctions which qualify as Force

Majeure events). These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, G-P shall minimize emissions to the greatest extent practicable. G-P must, at the beginning of every month, record its maintenance schedule for that month. To the extent practical, startup and shutdown of control technology systems will be scheduled during times when process equipment is also shut down for routine maintenance.

12. The schedules for installation, startup, and compliance testing of the control technology systems shall be in accordance with the following:

1. Installation of Control Technology Systems

a. Phase One

i. Within one (1) month from execution of this Consent Decree (hereinafter "execution of the Consent Decree" means the date on which the final signature of the parties required by this Consent Decree is obtained), G-P shall apply for state construction permits and/or construction permit waivers for placement of purchase orders for control technology systems and place purchase orders for plywood dryer control technology systems for initial full-scale prototype plant installations at two of the plywood plants listed in paragraph 8 (hereinafter, these two plants shall be referred to as the "Phase One plants").

18. G-P shall conduct, at least bi-annually (or more frequently as agreed by the parties), compliance demonstration tests in accordance with Schedule A to show compliance with the destruction efficiency requirement set out in Paragraph 11. Failure to achieve the destruction efficiency provided in Paragraph 11 from the dryers as shown by such tests shall subject G-P to stipulated penalties as set forth in Paragraph 51(g)(1).

B. PERMITS

19. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase One plants as soon as possible, but in no event later than 120 days after execution of this Consent Decree.

20. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase Two plants as soon as possible, but in no event later than twelve months after execution of this Consent Decree.

21. G-P agrees to obtain all appropriate federally enforceable permits for all of the plywood press modifications identified in Schedule B hereto. G-P will apply to the applicable state regulatory authority for such permits as the state determines are necessary as soon as practicable, but in no event later than 120 days after execution of this Consent Decree. The United States and G-P agree to abide by the state

determination, in each state where the facilities are located, of the appropriate permits and control technology, if any, required for the press modifications.

22. G-P has stated that it is contemplating either permanently closing the existing South Boston, Virginia, particleboard facility within one year of execution of this Consent Decree, or building a new particleboard facility adjacent to the existing South Boston particleboard facility and permanently closing the existing facility upon completion of the new facility. G-P shall provide the United States with notification within one year of execution of this Consent Decree of its intentions concerning the South Boston, Virginia facility. If G-P elects to build a new facility, it shall perform a PSD applicability analysis for the new facility that includes VOC emissions from all relevant equipment, including dryers and presses, and not later than two and one-half years after execution of this Consent Decree will close the existing South Boston facility. Based on the PSD applicability analysis, G-P will obtain the appropriate permits prior to start-up of the new facility. If G-P notifies EPA of its intent to close the facility within this one-year period, and then continues to operate the existing facility later than one year after execution of this Consent Decree, it will be subject to stipulated penalties as set forth in Paragraph 51(c), and G-P shall do a PSD

SCHEDULE B

PRESS MODIFICATIONS COVERED BY THE CONSENT DECREE

1. Peterman, Alabama

December 1980 expansion of presses Nos. 1 and 2 from 36 to 40 openings.
1985 expansion of presses Nos. 1 and 2 from 40 to 42 openings.

2. Talladega, Alabama

1983 expansion of presses Nos. 1 and 2 from 36 openings to 42 openings.
1990 construction of press No. 3 with 42 openings.

3. Crossett, Arkansas

1986 installation of a new press.

4. Fordyce, Arkansas

1988 expansion of presses Nos. 1-3 from 24 to 30 openings and installation of press no. 4.

5. Hawthorne, Florida

1985 installation of a new press.
1987 expansion of the press from 24 to 30 openings.

6. Cedar Springs, Georgia

1982 modernization of the press and expansion of number of openings from 40 to 45.

7. Madison, Georgia

1983 expansion of presses nos. 1-3 from 30 to 33 openings.
1985 expansion of presses nos. 1-3 from 33 to 36 openings.

8. Monticello, Georgia

June 1985 expansion of the three presses from 30 openings to 34 openings.

9. Gloster, Mississippi

1981 expansion of press No. 3 from 24 openings to 30 openings.
1988 installation of the 30 opening No. 4 press.

1/80 Converted press from 16 to 20 openings

6/80 Shelving rip & cross-cut saws

6/90 Rail car uploading screw

1980 New warehouse addition and shipping dock

Hawthorne, FL (Plywood facility)

Late 1980's Resin/glue reformulation

1995 Installed 7 additional platens to the No. 1 and 2 presses

11/85 Roller bars installed on No. 1 and 2 lathes to work in conjunction with the core drive

12/85 New tray systems installed on both lathes and new clipper installed on No. 2 lathe

Plant was originally constructed in 1979

1990 Existing Ward moisture detectors were replaced on No. 1 and 2 dryers with Elliott Bay Cypress moisture detectors.

1992 Existing Ward moisture detectors were replaced on No. 3 dryer with Elliott Bay Cross Tipple moisture detector.

3/92 Existing Ward dryer controllers were replaced with an in-house design based on Allen Bradley 5/30 moisture control systems.

Late 86/Early '87
Additional repairs made to boiler including replacing the bull nose tubes at the first baffle wall, replacing the kicking tiles on the back pass of the boiler, installing a retractable soot blower
at the boiler gas outlet, installing clinker chill blocks at both side, installing a retractable soot
blower at the boiler gas outlet, installing clinker chill blocks at both side walls at the grate area,
attaching tube shields to the exposed tubes in the ash box, replacing the second Ericz

classifier
with 2 Detroit rotary classifiers.

7/93 Series of additional repairs and improvements made to the boiler including installation of a front overfire air system, a manual damper, installation of 4 screw conveyors for fly ash removal, replacement of the existing pump, PLC controls and replacement of miscellaneous electrical parts.

6/94 Fly ash hopper was insulated and additional screw conveyor installed.Replaced the existing venturi scrubber with an electrostatic precipitator (project completed in 1995).

10/83 COE back-up rolls installed on both lathes.

6/84 New COE core drive installed on No. 1 lathe.

9/84 Modification to the back-up roll on No. 2 lathe.

12/85 Peerless bins

9/86 Two Super Sync updates installed onlathes

3/88 Core drive installed on No.2 lathe

7/82 Boiler

3/92 Automatic dryer controllers

7/82 Boiler multiclone / scrubber

7/82 Sander cyclone/bag filter

7/82 Dry waste cyclone & veneer waste cyclone

7/82 3 dryers (24 section, 20 section & 12 section)

7/82 Flyash system

7/82 2 skoog patchers

4/85 press #3, 24 opening

7/82 2 40 opening presses

UNITED STATES DISTRICT COURT
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CONSENT DECREE

XC: Jim P
8/14

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WHEREAS, Plaintiff further alleged that Defendant commenced construction of emitting facilities or modified emitting facilities without first obtaining the appropriate preconstruction permits required by the State Implementation Plans ("SIPs") approved pursuant to 42 U.S.C. § 7410;

WHEREAS, Plaintiff further alleged that Defendant failed to properly provide information to state and Federal regulatory agencies concerning potential air emissions from Defendant's facilities;

WHEREAS, EPA issued Notices of Violation with respect to such allegations to the Defendant on August 5, 1994 and May 18, 1995 (the "NOVs");

WHEREAS, the Defendant has denied and continues to deny the violations alleged in the NOVs and the Complaint;

WHEREAS, the United States and the Defendant have agreed that settlement of this action is in the best interest of the parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the United States and the Defendant have consented to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, and without any admission of the violations alleged in the Complaint or Notices of Violation, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. The Complaint states a claim upon which relief can be granted against the Defendant under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court has jurisdiction of the subject matter herein and over the

parties consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477. The Defendant does not admit and furthermore reserves its rights to contest the jurisdiction of this Court over, and to award relief for, subject matters or activities not expressly covered or required by this Consent Decree. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c). The Parties agree that nothing in this Consent Decree nor the fact that it is being entered into shall constitute any admission of fact or conclusion of law.

II. APPLICABILITY

2. The provisions of this Consent Decree shall apply to and be binding upon the United States and upon the Defendant as well as the Defendant's officers, employees, agents, successors and assigns. In the event Defendant proposes to sell or transfer any of its real property or operations subject to this Consent Decree, it shall advise in writing to such proposed purchaser or successor-in-interest of the existence of this Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA before such sale or transfer, if possible, but no later than the closing date of such sale or transfer. The Defendant shall provide a copy of this Consent Decree to the vendor(s) supplying the VOC control technology systems required by Part IV of this Consent Decree.

III. FACTUAL BACKGROUND

3. Defendant owns and operates the following plywood facilities in the United States:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Cedar Springs, Georgia (no longer in operation)
Madison, Georgia
Monticello, Georgia
Warm Springs, Georgia
Gloster, Mississippi
Louisville, Mississippi
Taylorsville, Mississippi
Dudley, North Carolina
Whiteville, North Carolina
Prosperity, South Carolina
Russellville, South Carolina
Emporia, Virginia

4. Defendant owns and operates a medium density fiberboard ("MDF") facility in Holly Hill, South Carolina.

5. Defendant owns and operates the following particleboard facilities in the United States:

Martell, California
Vienna, Georgia
Gaylord, Michigan
Oxford, Mississippi
Taylorsville, Mississippi
Louisville, Mississippi
Russellville, South Carolina
South Boston, Virginia

6. Defendant owns and operates the following oriented strand board ("OSB") facilities in the United States:

Woodland, Maine
Dudley, North Carolina
Grenada, Mississippi
Skippers, Virginia

7. The United States issued the NOVs to G-P alleging that G-P failed to properly document and identify to the appropriate permitting authorities potential emissions increases associated with the facilities identified in paragraphs 3 through 6.

IV. COMPLIANCE PROGRAM

A. PLYWOOD PLANTS

8. G-P shall obtain PSD or federally enforceable state minor source permits, based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in these permits) and Paragraph 11, for plywood dryers at the following ten plywood plants at issue in this case:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Madison, Georgia
Monticello, Georgia
Dudley, North Carolina
Louisville, Mississippi
Taylorsville, Mississippi

9. G-P shall obtain a federally enforceable minor source permit based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in the permit) and Paragraph 11 for dryers at the Skippers, Virginia OSB plant.

10. G-P shall install improved pollution control technology systems for control of volatile organic compounds ("VOCs") consisting of Regenerative Thermal Oxidation ("RTO"), Regenerative Catalytic Oxidation ("RCO") or other EPA-approved equivalent control technology systems ("control technology systems") on "hot zone" exhausts of the veneer dryers at the plants identified in Paragraph 8 and on the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P will specify in orders placed with equipment vendors that these controls have the design capacity for at least 95% destruction of VOCs.

11. G-P shall capture all VOC emissions from "hot zone" stacks of the veneer dryers and minimize fugitive emissions from dryer doors (through appropriate operation and maintenance procedures) and the "green end" of dryers (through proper balancing of "hot zone" exhausts) at the plants identified in Paragraph 8, and shall capture all VOC emissions from the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P shall achieve a minimum destruction efficiency of 90% for the captured VOC emissions at all dryers at the plants identified in Paragraphs 8 and 9 as demonstrated by compliance with the requirements of Parts IV.A. and IV.C. The 90% destruction efficiency need not be maintained during periods when the dryer(s) are not operating or during previously scheduled startup and shutdown periods (including bakeouts and washouts), and Force Majeure events (including malfunctions which qualify as Force

Majeure events). These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, G-P shall minimize emissions to the greatest extent practicable. G-P must, at the beginning of every month, record its maintenance schedule for that month. To the extent practical, startup and shutdown of control technology systems will be scheduled during times when process equipment is also shut down for routine maintenance.

12. The schedules for installation, startup, and compliance testing of the control technology systems shall be in accordance with the following:

1. Installation of Control Technology Systems

a. Phase One

i. Within one (1) month from execution of this Consent Decree (hereinafter "execution of the Consent Decree" means the date on which the final signature of the parties required by this Consent Decree is obtained), G-P shall apply for state construction permits and/or construction permit waivers for placement of purchase orders for control technology systems and place purchase orders for plywood dryer control technology systems for initial full-scale prototype plant installations at two of the plywood plants listed in paragraph 8 (hereinafter, these two plants shall be referred to as the "Phase One plants").

ii. Within three (3) months from execution of this Consent Decree, G-P will inform EPA of the type of control technology systems to be installed at the Phase One plants and provide a copy of the preliminary design drawings.

iii. Within four (4) months from execution of this Consent Decree, G-P shall take delivery of the control technology systems and commence installation at the Phase One plants.

iv. Within seven (7) months from execution of this Consent Decree, G-P shall complete installation of the control technology systems and start up controls at the Phase One plants.

v. Within ten (10) months from execution of this Consent Decree, G-P shall complete shake-down and debugging, and commence full-time operation of the control technology systems at the Phase One plants.

vi. Within twelve (12) months from execution of this Consent Decree, G-P shall submit test results demonstrating compliance at the Phase One plants with the destruction efficiency specified in Paragraph 11.

b. Phase Two

i. Within twelve (12) months from execution of this Consent Decree, G-P shall apply for state construction permits and/or construction permit waivers for placement of purchase orders for the control technology systems, and place purchase orders for plywood dryer control technology systems at the remaining eight (8) plywood plants listed in paragraph 8 (hereinafter, these plants shall be referred to as the "Phase Two plants"). At this time G-P shall also inform EPA of the type of control technology systems to be installed at the Phase Two plants and provide a copy of preliminary design drawings.

ii. Within twenty-six (26) months from execution of this Consent Decree, G-P shall complete shake-down and debugging, and commence full-time operation of the control technology systems for the Phase Two plants.

iii. Within thirty (30) months from execution of this Consent Decree, G-P shall submit test results demonstrating compliance with the destruction efficiency requirement specified in Paragraph 11 at the Phase Two plants.

c. Skippers, Virginia OSB Plant

13. As to the Skippers, Virginia OSB plant, G-P shall apply for a federally enforceable minor source permit within 120 days from execution of this Consent Decree; G-P shall place the purchase order for the control technology systems within 30 days of the issuance of the permit, and within 12 months from execution of this Consent Decree, G-P shall obtain the permit, install and start up the control technology systems and demonstrate compliance with the destruction efficiency specified in Paragraph 11 above.

2. Option To Install Alternate Control Technology

14. Subject to the requirements of this Paragraph and Paragraph 15, Defendant may elect to install an alternate control technology system, in lieu of the RTO-based or RCO-based control technology systems for any Phase Two plant provided that such alternate control technology system meets the destruction efficiency requirement provided in Paragraph 11, and further that any such alternate control technology system is installed in accordance with the schedules set out for Phase Two plants in paragraph 12(b).

15. If Defendant decides to install an alternate control technology system at any Phase Two plant, it shall advise the United States of its intent to do so not later than 60 days before it is required by the schedules in Paragraph 12(b) to contract for the procurement of the control technology system.

At this time the Defendant shall provide to EPA preliminary design information for the proposed control technology system and data which demonstrate that the proposed control technology system will meet the destruction efficiency provided in Paragraph 11. EPA will advise G-P within 30 days of receipt of this information as to whether G-P may go forward with the installation of the proposed alternative control technology system. In the event that Defendant's proposal to install the alternate control technology system is under review by EPA beyond 30 days, EPA shall agree to extend any or all affected Phase Two plant deadlines or milestones by an equivalent period of time.

3. Initial Compliance Determination

16. To demonstrate initial compliance with the destruction efficiency requirement specified in Paragraph 11, G-P will undertake compliance testing at the Phase One and Phase Two plants and the Skippers, Virginia OSB plant in accordance with the schedules set out in paragraphs 12 and 13 and the test protocol attached as Schedule A to this Consent Decree.

17. EPA shall advise G-P within 30 days of receipt of the compliance test results whether the destruction efficiency required by this Consent Decree as set out in paragraph 11 have been met. If EPA advises that this efficiency has not been met, G-P will be subject to the stipulated penalties set forth in paragraph 51(g)(1).

4. Subsequent Compliance Determination

18. G-P shall conduct, at least bi-annually (or more frequently as agreed by the parties), compliance demonstration tests in accordance with Schedule A to show compliance with the destruction efficiency requirement set out in Paragraph 11. Failure to achieve the destruction efficiency provided in Paragraph 11 from the dryers as shown by such tests shall subject G-P to stipulated penalties as set forth in Paragraph 51(g)(1).

B. PERMITS

19. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase One plants as soon as possible, but in no event later than 120 days after execution of this Consent Decree.

20. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase Two plants as soon as possible, but in no event later than twelve months after execution of this Consent Decree.

21. G-P agrees to obtain all appropriate federally enforceable permits for all of the plywood press modifications identified in Schedule B hereto. G-P will apply to the applicable state regulatory authority for such permits as the state determines are necessary as soon as practicable, but in no event later than 120 days after execution of this Consent Decree. The United States and G-P agree to abide by the state

determination, in each state where the facilities are located, of the appropriate permits and control technology, if any, required for the press modifications.

22. G-P has stated that it is contemplating either permanently closing the existing South Boston, Virginia, particleboard facility within one year of execution of this Consent Decree, or building a new particleboard facility adjacent to the existing South Boston particleboard facility and permanently closing the existing facility upon completion of the new facility. G-P shall provide the United States with notification within one year of execution of this Consent Decree of its intentions concerning the South Boston, Virginia facility. If G-P elects to build a new facility, it shall perform a PSD applicability analysis for the new facility that includes VOC emissions from all relevant equipment, including dryers and presses, and not later than two and one-half years after execution of this Consent Decree will close the existing South Boston facility. Based on the PSD applicability analysis, G-P will obtain the appropriate permits prior to start-up of the new facility. If G-P notifies EPA of its intent to close the facility within this one-year period, and then continues to operate the existing facility later than one year after execution of this Consent Decree, it will be subject to stipulated penalties as set forth in Paragraph 51(c), and G-P shall do a PSD

applicability analysis for the 1986 dryer modification at the existing South Boston facility.

23. G-P will apply to the state regulatory authority for a federally enforceable minor modification permit for the alleged 1989 dryer modification at the Gloster, Mississippi plywood plant. The permit application for this permit will state that the plant's physical production capacity after the alleged modification is 307,000 MSF, 3/8" basis. G-P will apply to the state regulatory authority for this permit as soon as practicable, but in no event later than 120 days after execution of this Consent Decree.

24. G-P will apply to the state regulatory authority for a federally enforceable synthetic minor source permit for the alleged 1994 dryer modification at the Holly Hill, S.C., MDF plant that will limit monthly production to 12.31 MMSF, 3/4" basis for five-week months, and 9.85 MMSF 3/4" basis for four-week months, and a weekly production limit of 2.8 MMSF, 3/4" basis. Until the state permit is obtained that contains these permit limits, these limits shall be imposed through this Consent Decree.

C. PARAMETRIC MONITORING

25. The provisions of this Part IV.C. are intended to assure continuous compliance with this Consent Decree and to allow G-P to quickly determine the need for maintenance or adjustment of the control technology systems. In order to

achieve and maintain the destruction efficiency provided in Paragraph 11 that is required of the control technology systems, G-P will establish a continuous parametric monitoring system at each of the plants identified in paragraphs 8 and 9. Parametric monitoring shall be conducted by establishing, through testing or otherwise, the parameters needed to be controlled (e.g., temperature, pressure drop across the system, and airflow for an RTO device; and catalyst temperature, pressure drop across the system and airflow from an RCO device), and the appropriate operating criteria to be maintained for each such parameter in order to ensure proper operation of the control technology system installed at a plant.

26. Immediately following the commencement of full-time operations of the control technology system required by this Consent Decree, but in no event later than twelve months from the execution of this Consent Decree for the Phase One plywood plants, thirty months for the Phase Two plywood plants, and twelve months for the Skippers, Virginia OSB plant, G-P shall commence a study, not to exceed six months in duration, of the control technology system to establish the parameters needed to be controlled and monitored as well as the appropriate operating criteria to be maintained for each such parameter in order to ensure proper operation of the control technology system. The results of such study and the associated proposed parametric monitoring protocol shall be submitted to EPA for review and

approval no later than six months from the date of the initial compliance testing as set out in paragraphs 12 and 13. Each study should establish for the affected unit an appropriate relationship between two or more operational parameters (depending upon which control technology system is implemented by G-P) and the destruction efficiency requirement provided in paragraph 11 of this Consent Decree. G-P should include in the study for each facility its proposed process parameters to be monitored and appropriate operating criteria. Studies for the Phase Two plants may be abbreviated in scope to the extent that determinations made during the studies for either the Phase One plants or earlier Phase Two plants are applicable to the subsequent studies. EPA will have 30 days to review and comment on the results of each facility's study and the proposed process parameters, during which time EPA will have the opportunity to request clarification or additional data from G-P to support the proposed parameters before determining that the study is complete. Once EPA determines that the study is complete, EPA will have 30 days to approve or disapprove the proposed parameters. The parametric monitoring system developed for each facility shall be incorporated into that facility's Title V permit by the permitting authority.

27. Within six months after EPA's approval of any parametric monitoring program for a control technology system at a plant, G-P shall have the necessary data recording equipment

for the monitoring program installed and operating at that plant, or have established manual data recordkeeping procedures.

28. No later than six months after EPA's approval of the parametric monitoring program, G-P shall begin monitoring and recording of the parameters. G-P shall monitor and record at each facility listed in Paragraphs 8 and 9 of this Consent Decree each parameter at least every 15 minutes and shall average the readings over a 12-hour period. To demonstrate compliance, G-P will provide EPA with a summary of its parametric monitoring data in accordance with Part V. Failure to monitor parameters at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(d). Failure to record the results of parametric monitoring at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(h). Failure to report the results of parametric monitoring at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(h). Failure to operate the control technology system within the approved parametric criteria will subject G-P to stipulated penalties as set forth in Paragraph 51(g)(2).

29. G-P's parametric monitoring devices will be calibrated or reevaluated based on compliance demonstration tests at the affected units as required in Paragraph 18, for the life of this Consent Decree. G-P shall provide EPA with an annual report

documenting its calibration or review of the parameters and propose changes if necessary. EPA will have the opportunity to request clarification or additional data from G-P to support the proposed changes. EPA will have 30 days after receipt of G-P's annual report to approve or disapprove any proposed changes to the parameters.

D. ENVIRONMENTAL AUDITS

30. The purpose of the environmental audits required by this Consent Decree is to obligate G-P to continue its review of the Clean Air Act compliance status, programs and practices of the Defendant's wood panel plants identified in Paragraphs 3-6, except lumber kilns, after implementation of the control technology systems, and testing requirements of this Consent Decree.

31. G-P has submitted to the United States for review a summary description of its environmental audit program, including the procedures and protocol, and the United States has agreed that G-P's current audit program (the "Audit Program") will satisfy the requirements of this Part IV.D. of this Consent Decree.

32. The Audit Program shall continue to include an evaluation of the recordkeeping practices, operating practices, pollution control strategies and technology of the Defendant as it relates to compliance with the Act at the plants identified in Paragraphs 3-6.

33. This Audit Program shall be conducted by G-P's internal environmental audit group ("Audit Group"). The Audit Group shall conduct its independent audit and prepare a report of its findings and recommendations.

34. Prior to conducting any audits of the plants identified in Paragraphs 3-6 after execution of this Consent Decree, the Audit Group must review for each plant the following as established from either the date of execution of this Consent Decree or from the last audit following execution of this Consent Decree, whichever is later, to the present:

1. general facility layout and plant operations;
2. plant production capacities;
3. permitting effect under the Act of any modifications to existing sources or the installation of new emissions source equipment;
4. emission monitoring, recordkeeping and reporting procedures;
5. applicable permit terms and conditions;
6. compliance history under the Act at each plant;
7. technical issues that affect the ability of the plant to comply with all applicable requirements of the Act, including state and Federal regulations and permit terms and conditions issued pursuant to the Act; and
8. plant management practices and procedures to assure compliance with the Act's requirements.

35. The Audit Program includes use of auditing protocols, procedures, and specific tasks for the audit, but does not restrict the Audit Group from conducting such inquiries as may be necessary to accomplish the purposes of the audit.

36. The Audit Program also includes a schedule for conducting the audit, and a schedule for the completion of all tasks established for the audit.

37. The Audit Group shall focus on determining compliance with applicable regulations under the Act as of the date of the audit. The Audit Group shall have access to and may review any records which will assist it in determining the Defendant's current compliance with applicable regulatory requirements of the Act, including state permitting records and historical records, as may be necessary.

38. G-P shall continue to employ a third party consultant's periodic participation in actual audits and assistance to the Audit Group throughout the process to ensure that G-P's audit procedures are followed. G-P will implement appropriate recommendations from the audit consultant to change the Audit Program.

39. The Audit Group shall have access to all units, areas, equipment, and structures at G-P's wood panel plants identified in Paragraphs 3-6, except lumber kilns, and shall perform an onsite inspection of each listed plant.

40. The Audit Group shall observe and review actual operation and maintenance procedures for the Defendant's wood panel plants identified in Paragraphs 3-6, as needed to determine present compliance with the Act and may request such information as necessary. The facility shall arrange for the collection of

the requested information, and the Audit Group shall be given the opportunity to observe and review such information.

41. G-P shall conduct its audits in accordance with its normal audit cycle/schedule, provided, however, that each of the wood panel plants identified in Paragraphs 3-6 of this Consent Decree, including co-located wood products facilities (except co-located wood kilns), is audited at least once during the life of this Consent Decree.

42. G-P shall submit a final Audit Summary Report in accordance with Paragraph 43 to EPA not later than sixty (60) days after completion of such audit. G-P shall provide two copies of the Audit Summary Report to EPA.

43. The Audit Summary Report shall describe the pertinent results of the audit, including but not limited to the following:

1. the procedures followed during the audit, including any deviations;

2. a description of each of the audited plants, including, where necessary to evaluate current compliance, the regulatory history of the plant(s);

3. the current compliance status of each plant, including any potential compliance issues;

4. any deviations observed during the audit, including identification of any untimely response to malfunctioning control technology systems or exceedances of applicable permit limits;

5. recommendations for corrections of observed deviations as provided in item 4 above and potential improvements or modifications that should be made to the facility's environmental compliance management program or operating

procedures to achieve and/or maintain compliance with all applicable Air Act requirements, and

6. a statement that any failure to comply with the Act detected by the audits has been or will be corrected.

44. G-P shall have the third party auditing consultant review some of the audits conducted at the facilities covered by this Consent Decree as part of the audit consultant's review of G-P's internal Audit Program. The third party consultant shall provide an annual certification to EPA that states as follows:

> I certify under penalty of law that G-P has implemented and followed the procedures outlined in G-P's Audit Program for the past calendar year and has adopted the following changes to its existing Audit Program recommended by me.

V. REPORTING AND RECORDKEEPING

45. Beginning with G-P's first full fiscal quarter beginning after entry of this Consent Decree, the Defendant shall submit a quarterly progress report to EPA within thirty (30) days after the end of each of G-P's fiscal quarters during the life of this Consent Decree. This report shall contain the following:

a. progress report on the implementation of the requirements of Part IV above;

b. weekly and monthly production at the Holly Hill, South Carolina facility to demonstrate compliance with the production limits imposed on that plant by paragraph 24 above;

c. a summary of the parametric monitoring data required by this Consent Decree for the quarter;

d. a description of any problems anticipated with respect to meeting the compliance program requirements; and

e. a description of all SEP implementation activity in accordance with Schedule D of this Consent Decree.

46. The quarterly report shall be certified by the Director of Corporate Environmental Engineering - Building Products as follows:

> I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

VI. CIVIL PENALTY

47. Within thirty (30) calendar days of entry of this Consent Decree, the Defendant shall pay to the United States a civil penalty pursuant to Section 113 of the Act, 42 U.S.C. § 7413 in the amount of six million dollars ($6,000,000.00). The civil penalty shall be paid by cashier's check or certified check in the sum stated above made payable to the "Treasurer, United States of America," and sent to

> United States Attorney
> Northern District of Georgia
> 1800 United States Courthouse
> 75 Spring Street, S.W.
> Atlanta, Georgia 30335

48. A photocopy of the check shall be sent to the United States as set out in the Notice provision of Paragraph 79 of this Consent Decree.

49. No amount of the civil penalty to be paid by G-P shall be used to reduce its federal or state tax obligations.

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

50. G-P shall implement certain supplemental environmental project(s) ("SEP(s)"), at an aggregate cost of $4.25 million, in accordance with Schedule D to this Consent Decree. G-P agrees that in any public statements regarding the funding of these SEPs, G-P must clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged Clean Air Act violations. No amount of the $4.25 million to be paid by G-P for SEPs shall be used to reduce its federal or state tax obligations.

IX. STIPULATED PENALTIES

51. The Defendant shall pay stipulated penalties to the United States for each failure by the Defendant to comply with the terms of this Consent Decree. The stipulated penalties will be calculated in the following amounts:

(a) for failure to meet the deadlines for installation of control technology systems and permitting for the Phase One and Phase Two plants, per day per plant:

1st through 30th day after deadline $1,250

31st through 60th day after deadline $3,000

Beyond 60th day $6,500

(b) for each exceedance of the weekly or monthly production limits at the Holly Hill facility as specified in paragraph 24 of this Consent Decree, the following penalties:

	Less than or equal to 10% above the production limits	Greater than 10% above the production limits
Exceedance of the Weekly Production limit	$ 750	$2,500
Exceedance of the Monthly production limit	$ 2,500	$8,000

(c) for each day of continued operation of the existing South Boston facility later than one year after execution of this Consent Decree after having notified EPA of its intent to close the facility within this one-year period:

1st through 30th day after deadline $1,500

31st through 60th day after deadline $3,250

Beyond 60th day $5,000

(d) for each day of failure to conduct parametric monitoring at any plant covered by this Consent Decree following six months after EPA's approval of G-P's parametric monitoring program at that plant:

1st through 30th day after deadline $1,000

31st through 60th day after deadline $2,000

Beyond 60th day $5,000

(e) for failure to conduct a compliance test as required by Paragraph 18, or failure to calibrate parametric monitors as required by Paragraph 29, per day per plant:

1st through 30th day after deadline	$1,000
31st through 60th day after deadline	$2,000
Beyond 60th day	$5,000

(f) for failure to implement the SEPs as set forth in Paragraph 50 and Schedule D hereto, $5,000 per day; provided, however, that if G-P has made good faith and timely efforts to complete the SEP(s), and certifies, with supporting documentation, that at least 90 percent of the amount of money which was required to be spent was expended on the SEP(s), no stipulated penalty shall be imposed.

(g)(1) for each failure to achieve the minimum 90% destruction efficiency required by Paragraph 11 for the control technology system as shown by compliance demonstration stack tests, per test:

Less than or equal to 10% below the destruction efficiency set forth in ¶11	Greater than 10% below the destruction efficiency set forth in ¶11
$10,000	$15,000

(g)(2) for the cumulative number of days within any month for which the required parametric monitoring specifications under Part IV.C. are not met, per day per plant:

	Less than or equal to 10% variance from the specified parametric criteria	Greater than 10% variance from the specified parametric criteria
at least two but less than seven days of the month	$1,500	$2,500
at least seven but less than twelve days of the month	$2,500	$5,000
at least twelve days up to the end of the calendar month	$3,750	$7,500

(h) for each failure to submit reports or studies, as required by any part of this Consent Decree or to provide any notice required by this Consent Decree, per day per report or notice:

1st through 30th day after deadline	$350
31st through 60th day after deadline	$750
Beyond 60th day	$1,250

(i) for failure to pay the civil penalty as specified in Part VI of this Consent Decree, $25,000 per day plus interest on the amount overdue at the rate specified in 31 U.S.C. § 3717.

(j) for failure to pay or escrow stipulated penalties, as specified in Paragraph 53 of this section, $2,500 per day per penalty demand.

52. Defendant shall pay stipulated penalties upon written demand by the United States no later than thirty (30) days after Defendant receives such demand. Stipulated penalties shall be paid to the United States in the manner set forth in Part VIII of this Consent Decree.

53. Should Defendant dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of the stipulated penalty for failure to pay a penalty due to the United States, by placing the disputed amount demanded by the United States, not to exceed $50,000 for any given event or related series of events at any one plant, in a commercial escrow account pending resolution of the matter and by invoking the Dispute Resolution provisions of Part XI within the time provided in this Part VIII for payment of stipulated penalties. If the dispute is thereafter resolved in Defendant's favor, the escrowed amount plus accrued interest shall be returned to the Defendant, otherwise the United States shall be entitled to the escrowed amount that was determined to be due by the Court plus the interest that has accrued on such amount, with the balance, if any, returned to the Defendant.

54. The United States reserves the right to pursue any other remedies to which it is entitled, including, but not limited to, additional injunctive relief for Defendant's violations of this Consent Decree. The United States will not

seek stipulated penalties and civil penalties for the same violation of the Consent Decree.

IX. RIGHT OF ENTRY

55. Any authorized representative of the EPA or an appropriate state agency, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of Defendant's plants identified herein at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting plant equipment, and inspecting and copying all records maintained by Defendant required by this Consent Decree. Defendant shall retain such records for a period of five (5) years. Nothing in this Consent Decree shall limit the authority of EPA to conduct tests and inspections under Section 114 of the Act, 42 U.S.C. § 7414.

X. FORCE MAJEURE

56. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Defendant shall notify the Plaintiff in writing as soon as practicable, but in any event within seven (7) business days of when Defendant first knew of the event or should have known of the event by the exercise of due diligence. In this notice Defendant shall specifically reference this Paragraph of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and

the measures taken or to be taken by Defendant to prevent or minimize the delay and the schedule by which those measures will be implemented. Defendant shall adopt all reasonable measures to avoid or minimize such delays.

57. Failure by Defendant to comply with the notice requirements of Paragraph 56 as specified above shall render this Part X voidable by the United States as to the specific event for which the Defendant has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

58. The United States shall notify the Defendant in writing regarding the Defendant's claim of a delay or impediment to performance within thirty (30) days of receipt of the Force Majeure notice provided under Paragraph 56. If the United States agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of the Defendant, including any entity controlled by the Defendant, and that the Defendant could not have prevented the delay by the exercise of due diligence, the parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances. Such stipulation shall be filed as a modification to this Consent Decree pursuant to the modification procedures established in this Consent Decree. The

Defendant shall not be liable for stipulated penalties for the period of any such delay.

59. If the United States does not accept the Defendant's claim of a delay or impediment to performance, the Defendant must submit the matter to this Court for resolution to avoid payment of stipulated penalties, by filing a petition for determination with this Court. Once the defendant has submitted this matter to this Court, the United States shall have fifteen business days to file its response to said petition. If the Defendant submits the matter to this Court for resolution and the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of the Defendant, including any entity controlled by the Defendant, and that the Defendant could not have prevented the delay by the exercise of due diligence, the Defendant shall be excused as to that event(s) and delay (including stipulated penalties), for a period of time equivalent to the delay caused by such circumstances.

60. The Defendant shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that the Defendant could not have prevented the delay by the exercise of due diligence. The Defendant shall also bear the burden of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date based on a particular event may,

but does not necessarily, result in an extension of a subsequent compliance date or dates.

61. Unanticipated or increased costs or expenses associated with the performance of the Defendant's obligations under this Consent Decree shall not constitute circumstances beyond the control of the Defendant, or serve as a basis for an extension of time under this Part. However, failure of a permitting authority to issue a necessary permit in a timely fashion may be an event of Force Majeure where the failure of the permitting authority to act is beyond the control of the Defendant and Defendant has taken all steps available to it to obtain the necessary permit including but not limited to:

a. submitting a complete permit application;

b. responding to requests for additional information by the permitting authority in a timely fashion;

c. accepting lawful permit terms and conditions; and

d. prosecuting appeals of any unlawful terms and conditions imposed by the permitting authority in an expeditious fashion.

62. Notwithstanding any other provision of this Consent Decree, this Court shall not draw any inferences nor establish any presumptions adverse to either party as a result of defendant delivering a notice of Force Majeure or the parties' inability to reach agreement.

63. As part of the resolution of any matter submitted to this Court under this Part X, the parties by agreement, or this

Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by the United States or approved by this Court. Defendant shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XI. DISPUTE RESOLUTION

64. The dispute resolution procedure provided by this Part XI shall be available to resolve all disputes arising under this Consent Decree, except as otherwise provided in Part X regarding Force Majeure, provided that the party making such application has made a good faith attempt to resolve the matter with the other party.

65. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the parties to this Consent Decree to another advising of a dispute pursuant to this Part XI. The notice shall describe the nature of the dispute, and shall state the noticing party's position with regard to such dispute. The party receiving such a notice shall acknowledge receipt of the notice and the parties shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

66. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the parties. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting between representatives of the United States and the Defendant, unless the parties' representatives agree to shorten or extend this period.

67. In the event that the parties are unable to reach agreement during such informal negotiation period, the United States shall provide the Defendant with a written summary of its position regarding the dispute. The position advanced by the United States shall be considered binding unless, within thirty (30) calendar days of the Defendant's receipt of the written summary of the United States position, the Defendant files with this Court a petition which describes the nature of the dispute. The United States shall respond to the petition within forty-five (45) calendar days of filing.

68. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Part XI may be shortened upon motion of one of the parties to the dispute.

69. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall not draw any inferences nor establish any presumptions adverse to either party

as a result of invocation of this Part XI or the parties' inability to reach agreement.

70. As part of the resolution of any dispute submitted to dispute resolution, the parties, by agreement, or this Court, by order, may, in appropriate circumstances, extend or modify, the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of dispute resolution. Defendant shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XII. GENERAL PROVISIONS

71. Effect of Settlement. This Consent Decree is not a permit; compliance with its terms does not guarantee compliance with all applicable Federal, State or Local laws or regulations.

72. G-P shall be able to use or rely on the emission reductions generated as a result of the control technology systems installed at the plants identified in Paragraphs 8 and 9 of this Consent Decree in any Federal or State emission averaging, banking, trading, or similar emission compliance program only to the extent of any reductions in excess of 95 percent of VOCs removed pursuant to the provisions of Paragraphs 10 and 11.

73. Satisfaction of all of the requirements of this Consent Decree constitutes full settlement of and shall resolve all civil and administrative liability of the Defendant to the United

States for PSD and minor source permitting violations covering all criteria pollutants for the modifications listed in Schedule C to this Consent Decree, any other violations alleged in the August 5, 1994 and May 18, 1995 NOVs, or in the United States' Complaint.

74. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Defendant of its obligation to comply with all applicable Federal, State and Local laws and regulations. Subject to Paragraph 73, nothing contained in this Consent Decree shall be construed to prevent or limit the United States' rights to obtain penalties or injunctive relief under the Act or other federal, state or local statutes or regulations, including but not limited to, Section 303 of the Act, 42 U.S.C. § 7603.

75. Third Parties. This Consent Decree does not limit, enlarge or affect the rights of any party to this Consent Decree as against any third parties.

76. Costs. Each party to this action shall bear its own costs and attorneys' fees.

77. Public Documents. All information and documents submitted by the Defendant to the United States pursuant to this Consent Decree shall be subject to public inspection, unless subject to legal privileges or protection or identified and supported as business confidential by the Defendant in accordance with 40 C.F.R. Part 2.

78. Public Comments. The parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the requirements of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and consideration of any comments.

79. Notice. Unless otherwise provided herein, notifications to or communications with the United States or the Defendant shall be deemed submitted on the date they are postmarked and sent either by overnight receipt mail service or by certified or registered mail, return receipt requested. Except as otherwise provided herein, when written notification to or communication with the United States, EPA, or the Defendant is required by the terms of this Consent Decree, it shall be addressed as follows:

As to the United States:

Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044

United States Attorney
Northern District of Georgia
1800 United States Courthouse
75 Spring Street, S.W.
Atlanta, Georgia 30335

As to the U.S. EPA:

Director, Air Enforcement Division
Office of Enforcement and Compliance Assurance

Environmental Protection Agency
401 M Street, S.W.
Mail Code 2242A
Washington, DC 20460

Laxmi Kesari, Multimedia Enforcement Division
Office of Enforcement and Compliance Assurance
Environmental Protection Agency
401 M Street, S.W.
Mail Code 2248A
Washington, DC 20460

and
the EPA Regional Administrator for the region in which the facility is located

As to Georgia-Pacific Corporation:

Gordon R. Alphonso
Senior Counsel
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

Richard A. Moser
Director - Environmental Engineering
Building Products
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

80. Any party may change either the notice recipient or the address for providing notices to it by serving all other parties with a notice setting forth such new notice recipient or address.

81. Modification. There shall be no modification of this Consent Decree without written approval by both parties to this Consent Decree, or by Order of the Court.

82. Continuing Jurisdiction. The Court retains jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree

and to take any action necessary or appropriate for its interpretation, construction, execution, or modification. During the term of this Consent Decree, any party may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

XIII. TERMINATION

83. This Consent Decree shall be subject to termination upon motion by either party after the Defendant satisfies all requirements of this Consent Decree, including payment of all penalties that may be due to the United States under this Consent Decree, installation of control technology systems as specified herein, the receipt of all permits specified herein, EPA's receipt of the first quarterly progress report following the conclusion of one year's operation of the EPA-approved parametric monitoring system for the plants listed in Paragraphs 8 and 9 of this Consent Decree, and G-P's submission of a final report indicating that G-P has satisfied the requirements set forth in Schedule D and that all obligations for implementation of SEPs have been met. At such time, if the Defendant believes that it has maintained compliance with the requirements of this Consent Decree and the permits specified herein, and has paid the civil penalty and any stipulated penalties required by this Consent Decree, then the Defendant shall so certify to the United States,

and unless the United States objects in writing with specific reasons within 60 days of receipt of the certification, the Court shall order that this Consent Decree be terminated on Defendant's motion. If the United States so objects to the Defendant's certification, then the matter shall be submitted to the Court for resolution under Paragraphs 67-70 of this Consent Decree. If the parties cannot agree on Defendant's certification, then the disputing parties shall submit this matter to the Court for resolution. In such case, the Defendant shall bear the burden of proving that this Consent Decree should be terminated.

FOR PLAINTIFF, UNITED STATES OF AMERICA,

Dated: July 17, 1996

Lois J. Schiffer
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
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Washington, DC 20530

Dated: July 17, 1996

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Dated: July 17, 1996

Dianne Shawley
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Kent Alexander

Dated: 7/17/96

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Dan Caldwell

Dated: 7/16/96

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Dated: 7/16/96

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Dated: 7/17/96

Steven A. Herman
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FOR DEFENDANT, GEORGIA-PACIFIC CORPORATION

Dated: 7/17/96

James F. Kelley
Senior Vice President - Law
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Dated: 7/17/96

Gordon R. Alphonso
Senior Counsel
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133 Peachtree Street, N.E.
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Dated: 7/17/96

David T. Buente, Jr.
Sidley & Austin
1722 Eye Street, N.W.
Washington, D.C. 20006

So entered in accordance with the foregoing this _____ day of _____, 1996.

United States District Court Judge
for the Northern District of
Georgia

SCHEDULE A

COMPLIANCE DETERMINATION TESTING PROTOCOL

Georgia-Pacific (G-P) agrees to undertake compliance determinations for the 11 facilities that will be installing improved pollution control devices under the consent decree according to the terms identified in this testing protocol. The following requirements are applicable both to plywood facilities and the Skippers OSB facility. Where a particular requirement is relevant to only one process, it is noted as such.

A. General Requirements

1. EPA may provide representatives, including contractors, to observe any tests.

2. Testing must be performed to determine emissions levels for volatile organic compounds (VOCs) entering and exiting the improved pollution control devices.

3. The test method to be used must be Method 25A for VOC emissions from dryers. Appropriate modifications to Method 25A will be allowed as required to accommodate moisture levels in the emissions stream. G-P has the option of selecting an alternative test method. Appropriate modifications to Method 25A and/or selection of an alternative test method will be determined in consultation with, and approved by, EPA's Office of Air Quality, Planning and Standards, Emission Measurement Center (Mr. Gary McAlister). For both types of plants, Methods 1-4 must be used for stack gas flow rate and moisture content.

4. Testing must be conducted on emissions from all dryers at the facility (hot zones only for plywood dryers).

5. During any test, the plant shall be operated in such a way that each dryer is operating as closely as possible to its maximum design.

6. G-P will submit, as specified below, a pretest report and an emission test report.

B. Pretest Report Requirements

At least two weeks prior to any test that will be used for compliance determination purposes, G-P will submit a pretest report for that plant. Multiple plants may be included in one pretest report. EPA will review the pretest information and, in the event of any deficiencies or discrepancies in the test protocol, G-P will be notified prior to the scheduled test date. Submittal of this information will minimize the possibility of improper sampling or data collection procedures which could lead to inconclusive compliance determinations.

Any proposed modifications to any of these sampling or analytical procedures must be indicated in the pretest report information, including justification for the modifications, and for any material modifications, G-P must receive written approval from EPA prior to testing.

The pretest information to be submitted includes, at a minimum:

1. A brief description of the air pollution control equipment associated with the process, if any, including:
   a. Type of control device
   b. Operating parameters at maximum process conditions.

2. A description of the emission sampling equipment including a schematic diagram of the sampling train.

3. A sketch with dimensions indicating the flow of exhaust gases from the process, through the control equipment associated ductwork to the stack.

4. According to Method 1, 40 CFR 60:
   a. An elevation view of the dimensions of the stack configurations indicating the location of the sampling ports and distances to the nearest upstream and downstream flow interferences.
   b. A cross-sectional sketch of the stack at the sampling location with dimensions indicating the location of the sampling traverse points.

5. Estimated gas flow conditions at sampling location, including temperature, moisture content, velocity, and static pressure.

6. A description of the process and control equipment operating data to be collected during the sampling period. Include the maximum design dry furnish production rate for each dryer and the proposed dry

furnish production rate during testing. Also include the proposed feed stock composition for the test and compare this composition to past feed stock composition.

7. Copies of the field data sheet forms to be used during the tests.

8. Identification of the testing firm which will be performing the tests.

9. A description of the procedures for maintaining the integrity of the samples collected, including chain of custody and quality control procedures.

C. Emission Test Reporting Requirements

The emission test report shall contain all pertinent data concerning the test, including a description of the process and operating conditions under which the tests were conducted, the results of the test, and test procedures. Presented below is a suggested format containing required information.

1. Introduction & Summary
   a. Identification, location, and dates of tests.
   b. Summary of emissions data.
   c. Name and affiliation of all persons participating in tests.

2. Dryer Operating Conditions During Testing
   a. Description of, and records from, process parameters and control equipment parameters monitored during the tests.
   b. Maximum process feed rate recorded during the tests.
   c. Moisture content of the wood being processed into and out of the dryers.
   d. Type of wood
      i. % hard wood
      ii. % soft wood
   e. Dryer operating temperature and maximum design temperature
      i. high and low dryer temperature in the last two years (or a lesser period if records are unavailable)
      ii. temperature as heat supplied (i.e. temperature of steam if steam heated)
      iii. inlet temperature of the dryer during the test (OSB dryers)
      iv. outlet or exit temperature (OSB dryers)
      v. zone temperature (plywood dryers)

f. Actual and design air flow rate
g. Type of fuel being used
   i. % wood
   ii. % waste oil and liquid resin waste
h. Total heat content in BTU/lb. (For direct-fired dryers)
i. Estimate of amount of wood processed by weight/hr
j. Size of the dryer
   i. length (OSB dryers)
   ii. diameter (OSB dryers)
   iii. number of dryer sections (plywood dryers)
k. Wood mixture data with moisture content (OSB dryers)
   i. % dried dead wood
   ii. % green wood
   iii. % chips & other

3. Sampling and analytical procedures
   a. Description of sampling train and field procedures.
   b. Description of recovery and analytical procedures.
   c. Sketch indicating sampling port locations relative to process, control equipment, upstream and downstream flow disturbances.
   d. Sketch or cross-sectional view of stack indicating traverse point locations.
   e. Copies of all field data collected during the test (including filter temperatures of testing device), including sampling data sheets and process operating logs.
   f. Copies of all analytical laboratory data, including analyzers' response factor determinations.
   g. Sampling equipment and laboratory calibration data.
   h. Copies of all chain of custody information.

4. Calculation and data reduction methods
   a. Description of computational methods, including equation format used to obtain final emissions results from field data.
   b. Sample calculations from at least one run of each type of test performed.

5. Test results and discussion
   a. Detailed tabulation of results including process operating conditions and gas flow conditions.
   b. Discussion of any divergences from normal sampling procedures or operating conditions which could have affected the test results.

SCHEDULE B

PRESS MODIFICATIONS COVERED BY THE CONSENT DECREE

1. Peterman, Alabama

December 1980 expansion of presses Nos. 1 and 2 from 36 to 40 openings.
1985 expansion of presses Nos. 1 and 2 from 40 to 42 openings.

2. Talladega, Alabama

1983 expansion of presses Nos. 1 and 2 from 36 openings to 42 openings.
1990 construction of press No. 3 with 42 openings.

3. Crossett, Arkansas

1986 installation of a new press.

4. Fordyce, Arkansas

1988 expansion of presses Nos. 1-3 from 24 to 30 openings and installation of press no. 4.

5. Hawthorne, Florida

1985 installation of a new press.
1987 expansion of the press from 24 to 30 openings.

6. Cedar Springs, Georgia

1982 modernization of the press and expansion of number of openings from 40 to 45.

7. Madison, Georgia

1983 expansion of presses nos. 1-3 from 30 to 33 openings.
1985 expansion of presses nos. 1-3 from 33 to 36 openings.

8. Monticello, Georgia

June 1985 expansion of the three presses from 30 openings to 34 openings.

9. Gloster, Mississippi

1981 expansion of press No. 3 from 24 openings to 30 openings.
1988 installation of the 30 opening No. 4 press.

10. Taylorsville, Mississippi

1986 installation of plywood press No. 4.
1989 expansion of plywood presses Nos. 1-4 from 30 openings to 36.

11. Dudley, North Carolina

1987 expansion of the presses from 40 openings to 42.

12. Whiteville, North Carolina

1981 installation of a 30 opening press.
1986 expansion of presses Nos. 1-3 from 30 openings to 32.

13. Prosperity, South Carolina

1983 Georgia-Pacific installation of a 30 opening press.
1992 replacement of the existing 34 opening press no. 2 with a new 40 opening press.
1981 expansion of press No. 1 from 36 openings to 40.
1989 expansion of press No. 2 from 30 openings to 34.

14. Russellville, South Carolina

1984 installation of a 30 opening plywood press.
1987 expansion of plywood presses Nos. 1-3 from 24 openings to 30.

15. Emporia, Virginia

1983 installation of a new 40 opening press.
1987 expansion of presses numbers one and two from 30 to 32 openings each.

SCHEDULE C

Peterman, Alabama (Plywood facility)

Late 1980's Resin/glue reformulation

12/86 Powered roller bars were installed on both lathes.

8/87 SCR lathe drives were installed on both lathes.

12/88 One core drive was installed on the No. 2 lathe to enable the lathe to peel cores down to a smaller diameter.

11/90 Auto gap controls were installed on both lathes.

12/90 Laser scanners were installed on both lathes.

1/93 The boiler collector tubes were replaced with like-kind tubes.

11/82 Metal covers were installed on each vat to reduce heat loss from the vat water.

11/82 The worn out vat heater exchanger and pipes were replaced on all 6 vats with stainless steel units.

11/83 COE XY lathe chargers and back-up rolls were installed on both lathes.

9/84 Super Sync Positrol Systems were installed on both lathes.

7/86 One core drive was installed on the No. 1 lathe.

7/90 Delta t dryer controls #1, #2, #3 dryers

7/90 Upgrade moisture detectors #1, #2, #3 dryers

12/86 Upgrade moisture detectors #1 & #2 dryers

5/79 Skoog patcher w/ strip & patch saw

11/85 Modify #1 & #2 presses - add 2 openings each

8/80 Modify #1 & #2 presses - add 4 openings each

6/89 Add single head sander, t&g & siding machine

5/83 Center cut fishtail saw

8/92 Waster sheet saw

6/89 Skoog machine

9/83 Skoog machine

12/78 T & G machine

Talladega, Alabama (Plywood facility)

Late 1980's Resin/glue reformulation

11/92 Installed baghouse

1986 Rewired three dryers. Installed Texas Instruments PLCs on three dryers.

1989 Replaced Ward moisture detectors on three dryers with Delta T dryer temperature controls and Elliott Bay Cypress moisture detectors.

1990 Replaced press pneumatic temperature controllers with Texas Instrument Solid State RTD-style temperature probes.

1987 Reskinned No. 1 dryer.

1987 Replaced 3-row heater coils with 5-row heater coils.

1989 Rebuilt No. 2 dryer.

1984 Upgraded vat water system.

1984 Installed 8' log vat.

1987 Installed heat exchanger on log vat holding tank.

1988 Installed new log vat.

1992 Replaced heat exchangers in 3 vats.

1982 Replaced charger on No. 1 lathe with XY charger.

1983 Installed two backup rolls on lathes.

1983 Installed XY charger on lathe No. 2.

1984 Replaced tipple tray, clipper table and unloader drives.

1986 Installed two powered roller nose bars on lathes.

1988 Replaced lathe chargers.

1989 Changed laser scanners on lathes.

1990 Installed auto gap controls on lathes.

7/88 Boiler soot blower

5/86 Lilly pad chipper

10/80 Veneer dryer computer

10/79 #1 & #2 Press conversions - 30 to 36 openings

5/89 Upgrade dryer controls

5/78 10 Section dryer

12/88 Add 4 Sections #3 Dryer

11/78 Veneer dryer computer

11/90 42 Opening Press

7/83 #1 & #2 Press Conversion - 36 TO 42 Openings

4/87 Single head sander on specialty machine

5/82 Sander & specialty machine w/ bagfilter

9/84 Core saw green end

12/86 Boiler scrubber ash system

5/79 Condensate traps - dryers #1 & #2

5/79 Condensate traps - dryer #3

Crossett, Arkansas (Plywood facility)

Late 1980's Resin/glue reformulation

8/28/81 Began use of natural gas or No. 2 fuel oil as boiler fuel during start-up or emergency conditions as permitted by State.

2/4/83 Modified sanderdust system including elimination of old baghouse at 9-A boiler and replacement of the Carothers secondary baghouse filter with new MAC 120 MWP 140 primary bag filter.

5/16/89 Installed new six-head sander in plant No. 2 including installation of new fabric filter equipment.

1986 Replaced existing relay controls with Texas Instrument PLCs on dryers 1 through 7.

1989 Installed Allen Bradley PLCs on presses 1 through 7.

1989 Replaced existing moisture detectors and dryer tenders on 8 dryers with Elliott Bay Cypress detectors.

1989 Replaced Texas Instrument PLC controllers on dryers No. 7 and 8 with Allen Bradley PLCs.

1992 Replaced Texas Instrument PLC on dryer No. 4 with Allen Bradley PLC.

1992-93 Replaced existing temperature controllers on all 7 presses with Honeywell electronic controllers.

1993 Replaced Texas Instrument PLC controllers on dryers No. 1 and 6 with Allen Bradley PLCs.

1994 Replaced Texas Instrument PLC on dryer No. 2 and Allen Bradley PLC.

1984 Replaced condensate system on boilers.

1985 Upgraded boiler feedwater system.

1986 Installed economizers on boilers.

1987 Replaced char separators for ash handling system with rotary sand/char separators.

1988 Installed boiler vacuum breaker.

1988 Changed boiler air flow system.

1994 Replaced existing screw conveyer and ash box system with ash sluice system.

1980-82 Replaced dryer panels on all 7 dryers; Replaced existing steam coils with larger coils.

1980 Replaced press rams.

1986 Replaced press platens.

1990 Installed press scrapers.

1986 Installed two new log vats.

1994 Installed 10' log vat.

1980 Changed lathe spindle drives and veneer tray drives.

1980 Completed green end modernization including replacement of lathe clippers and installation of new strip accumulator.

1981 Installed XY charger on No. 3 lathe.

1983 Installed Morvue scanners.

1983 Installed backup rolls and XY chargers on lathes Nos. 1 and 2.

1983 Installed backup rolls on lathes Nos. 3 and 4.

1984 Installed high speed spindles on lathe No. 3.

1985 Replaced lathe carriage.

1987 Installed 4 power nose bars.

1990 Installed autogap controls on all 5 lathes.

1994 Lathe tray conversions on lathes 1, 2, 3 and 4.

6/78 Convert #1, #2, #3 presses (PL#1) 24 to 30 openings

6/79 Convert #4, #5, #6 presses (PL#2) 24 TO 30 openings

6/79 Replace sander, plant #1

6/80 Replace specialty saw w/ sander, plant #2

12/81 Installed (2) 150,000 lbs/hr wood-fired boilers

6/83 Replace exist cyclone/bagfilter on sanderdust fuel system

6/84 Two (2) log vats

6/85 Two (2) log vats w/ vat water holding system

6/85 Repl specialty saw w/ sander, bagfilter, plant #1

6/86 Installed 9/10 ft panel line incl: lathe,

6/86 16-section veneer dryer, 30-opening press,

6/86 Specialty saw w/ sander, skinner saw, patchline,

6/86 Cyclone, bagfilter

6/86 Replaced existing sander multicyclone w/ bagfilter

6/87 Two (2) log vats

6/89 Delta t controls, (8) veneer dryers

3/90 Sander w/ bagfilter, plant #2

6/90 Planer shavings truck bin w/ cyclone

3/91 Replace #1 & #2 boiler scrubbers

12/92 Replace #1 & #2 boiler dust collector tubes

Crossett, Arkansas (Studmill)

1990 Addition of planer shavings truck bin and cyclone (SN-C25).

1994 Studmill air application update with identified modifications.

Fordyce, AR (hardwood sawmill)

1/90 Boiler installation

1989 lathe installation

1990 Installation of green lumber pre-dryer.

Fordyce, AR (Plywood facility)

Late 1980's Resin/glue reformulation

10/81 State granted approval to allow use of natural gas or #2 fuel oil as boiler fuel in the two wood-fired boilers during start-up and emergency conditions.

11/82 Replaced all existing boilers with a single woodwaste boiler and installed a high efficiency cyclone and collector.

9/84 Installed tongue and groove machine.

10/90 Permitted a Polutrol VHE 20 pack multicyclone and high efficiency cyclone instead of a baghouse in conjunction with the 1974 woodwaste boiler installation.

12/29/90 Permit update with specific reference to earlier modifications:

1977 - Changed pneumatic conveying system from 11 to 6 systems.

6/77 - Installed dry waste systems Nos. 1 and 2, modified and relocated dry waste system No. 3.

1980 Installed Ward moisture detectors on three dryers.

1980 Replaced original relay systems on three presses with Allen Bradley PLCs.

1987 Installed Texas Instrument processor on three dryers.

1989 Replaced Ward moisture detectors on three dryers with Elliott Bay Cypress detectors.

1989 Installed Delta Ts on three dryers.

1989 Installed Texas Instrument PLC on No. 4 press.

1983 Replaced ID fan and housing for wood fired boiler.

1988 Replaced incline fuel feed chain conveyors.

1988 Installed soot blower.

1980 Installed patch line.

1983 Removed muffin monsters from 5 log vats.

1985 Installed vat water storage tank with heat exchange.

1987 Updated vat caustic treatment system.

1981 Installed XY chargers on No. 1 lathe.

1983 Installed XY charger system on No. 2 lathe.

1984 &1985
Installed synchronization control packages on lathes Nos. 1 & 2.

1985 Removed No. 3 lathe.

1985 Installed high speed spindles on No. 1 lathe.

1986 Installed rotary clippers on Nos. 1 & 2 trays.

1987 Installed rotary trash gates on Nos. 1 & 2 tray systems.

Installed trays on Nos. 1 & 2 systems.

Installed powered roller nose bars on Nos. 1 & 2 lathes.

1988 Replaced drive on No. 2 lathe.

1989 Installed laser scanners on Nos. 1 & 2 lathes.

1990 Installed auto gap controls on Nos. 1 & 2 lathes.

Conversion from spray-on glue to foam glue.

6/87 Boiler ash recovery system

6/86 Rail car chip cyclone

6/80 patchline

6/87 installed 30 opening press

6/87 Convert #1, #2, & #3 presses - 24 to 30 openings

6/89 Skinner saw

6/85 Replace boiler scrubber

6/78 1 log vat

6/85 1 log vat

Martell, CA (Sawmill)

1979 Installed new Wellons woodwaste boiler.

1990 Wellons boiler (No. 5) converted from woodwaste to natural gas.

1991 Wellons flue gas circulating fan and damper replaced.

1993 Wellons boiler fan bearings replaced.

1994 Final removal of No. 1 and No. 2 Atlas boilers.

1988 Permit modification to allow use of almond shells as auxillary fuel.

1989 Planer mill cyclone replacement.

1992 Planer mill hog cyclone replacement.

1993 Railcar chip loading pneumatic conveyor modification.

1994 Coastal planer cyclone replacement.

1979 Wellons woodwaste-fired boiler was install.

Martell, CA (Particle Board)

6/90 Tower Project:
1 SCREEN AND ASSOC. CONVEYANCE
1 PRIMARY SCREEN
2 SECONDARY SCREENS
2 REFINERS
5 BAGFILTERS FOR CYCLONE DISCHARGES
1 FIRE DUMP SCREW
1 MAGNET FOR METAL REMOVAL
1 ACCEPTS SILO FOR SCREENED MATERIAL

Late 1980's	Resin/glue reformulation
1/14/77	Installed interconnect between #4 tall stack boiler and face dryer system.
1/31/77	Installed intermediate dryer baghouse.
4/5/77	Modified hammermill cyclone.
12/15/90	Installed new baghouse to handle particleboard core sawdust.
12/5/91	Replaced pneumatic system CP105 with CP105A and CP105B including 2 12,000 ACFM fans and 7' cyclones.
5/1/92	Installed waste sawdust disposal system including small feed bin and transfer screw added to existing boiler fuel feed system.
6/17/92	Began burning waste sawdust in No. 4 boiler as permitted by State.
9/16/92	Began using hydraulic fluids with the sawdust as fuel for the No. 4 boiler as permitted by State.
1/14/93	Modified intermediate dryer to remove inner tubes and convert dryer from triple to single pass.
2/11/93	Replaced intermediate dryer.
4/26/93	Began using diesel- soaked wood as fuel in No. 4 boiler auxillary feed system as permitted by State.

8/9/93 Replaced cyclones on both the core dryer and intermediate dryer exhausts.

6/86 Stack gas connection from No. 4 boiler installation to allow stack gas to flow directly to the face, core or intermediate dryers or through the ROEMMC burner.

1986 Bailey fan/firing rate controls installed on No. 4 boiler.

1986 Multiclone ash collector changed on No. 4 boiler.

1987 COE sanderdust burners installed on No. 4 boiler to replace 1 large sanderdust burner.

10/92 Auxillary feed screw installed on No. 4 boiler.

Mid 80's Original face and core dryer drums were replaced with like-kind drums because existing ones were worn out.

1995 Replaced existing core and intermediate dryer exhaust cyclones with 2 Fisher-Klosterman high efficiency cyclones

1995 Relocated existing Littleford blender and installed new IMAL blending system and eliminated all post-blending screw type conveyors and 2 convey blenders (project completed in 1995).

6/84 Roemec sanderdust burner & ash collector

12/80 Two finishing heads & bagfilter on panel sander

6/86 Board breaker

6/89 Board cooler

3/92 Log chipper

6/83 Three dryer fire abort chutes

6/92 Pre-dryer fire abort chute

6/84 Schutte grinder and cyclone

1/80 Converted press from 16 to 20 openings

6/80 Shelving rip & cross-cut saws

6/90 Rail car uploading screw

1980 New warehouse addition and shipping dock

Hawthorne, FL (Plywood facility)

Late 1980's Resin/glue reformulation

1995 Installed 7 additional platens to the No. 1 and 2 presses

11/85 Roller bars installed on No. 1 and 2 lathes to work in conjunction with the core drive

12/85 New tray systems installed on both lathes and new clipper installed on No. 2 lathe

Plant was originally constructed in 1979

1990 Existing Ward moisture detectors were replaced on No. 1 and 2 dryers with Elliott Bay Cypress moisture detectors.

1992 Existing Ward moisture detectors were replaced on No. 3 dryer with Elliott Bay Cross Tipple moisture detector.

3/92 Existing Ward dryer controllers were replaced with an in-house design based on Allen Bradley 5/30 moisture control systems.

Late 86/Early '87
Additional repairs made to boiler including replacing the bull nose tubes at the first baffle wall, replacing the kicking tiles on the back pass of the boiler, installing a retractable soot blower at the boiler gas outlet, installing clinker chill blocks at both side, installing a retractable soot blower at the boiler gas outlet, installing clinker chill blocks at both side walls at the grate area, attaching tube shields to the exposed tubes in the ash box, replacing the second Ericz

classifier
with 2 Detroit rotary classifiers.

7/93 Series of additional repairs and improvements made to the boiler including installation of a front overfire air system, a manual damper, installation of 4 screw conveyors for fly ash removal, replacement of the existing pump, PLC controls and replacement of miscellaneous electrical parts.

6/94 Fly ash hopper was insulated and additional screw conveyor installed.Replaced the existing venturi scrubber with an electrostatic precipitator (project completed in 1995).

10/83 COE back-up rolls installed on both lathes.

6/84 New COE core drive installed on No. 1 lathe.

9/84 Modification to the back-up roll on No. 2 lathe.

12/85 Peerless bins

9/86 Two Super Sync updates installed onlathes

3/88 Core drive installed on No.2 lathe

7/82 Boiler

3/92 Automatic dryer controllers

7/82 Boiler multiclone / scrubber

7/82 Sander cyclone/bag filter

7/82 Dry waste cyclone & veneer waste cyclone

7/82 3 dryers (24 section, 20 section & 12 section)

7/82 Flyash system

7/82 2 skoog patchers

4/85 press #3, 24 opening

7/82 2 40 opening presses

4/87 6 additional press openings - press #3

5/85 Ramp for loading mulch

7/82 Panel sander

2/88 Single head sander on t & g machine

7/82 Center cut saw

7/82 Center cut fishtail saw

7/82 Fishtail saw

7/82 Saw line

7/82 Specialty saw

12/86 Boiler scrubber replacement

10/89 Skoog patcher

10/84 Skoog patcher

7/82 T & G machine

7/82 6 vats

Cedar Springs, GA Plywood

Late 1980's **Resin/glue** reformulation

1980 Replacement of Mann Russell moisture detectors with Ward Moisture Logic 220 C Detectors on dryers.

1982 Replaced press relay system with Allen Bradley PLC.

1988 Replaced Ward Moisture detectors with Elliott Bay Cypress moisture detectors on dryers.

1988 Installed Delta T dryer controls.

1982 Replaced boiler control system.

1986 Installed new fuel feeder drives on two boilers.

1988 Installed boiler fuel mixing system.

1990 Repair/rebuild of boiler.

1991 Boiler upgrade.

1985 Installed press temperature monitoring system.

1982 Log vat modification - water recirculation and heating system.

1985 Rebuild of vat water cleaning system to a fine mesh screen.

1988 Installed 3 new vats.

1989 Replaced 4 vats with 3 new ones.

1992 Heat exchangers installed on vats.

1981 Lathe carriage drive replaced with digital controlled DC drive.

1981 Installed spindle conversion kit and rotary knife veneer cutter.

1982 Solid state drives and a logic control system and an XY charger installed on lathe.

1982 Tray system changed.

1983 Replaced lathe carriage drive with digital carriage/back-up roll drive system.

1986 Installed powered roller nose bar.

1987 Installed powered core drive system.

1989 Installed COE digital carriage drive system.

6/79 Boiler multiclone replacement (2)

6/80 Debarker cyclone replacement

12/82 Modernize veneer line

12/91 Veneer patch equipment

7/82 Press modernized&converted from 20 to 45 openings

1991 Boiler modifications

1988 Delta t dryer controls

Madison, GA Plywood

Late 1980's Resin/glue reformulation

Plant was originally constructed in September 1978.

5/7/85 Installed new Carter Day baghouse including installation of a pressure (vacuum) indicator.

1983 The existing Ward moisture logic Model 220C moisture detectors on the 24-section and 20-section dryers were replaced with Wagner 1375 moisture detectors.

1985 The original Westinghouse numerologic press relay systems were replaced with Allen Bradley 2/30 PLCs.

1987 Allen Bradley 2/15 dryer PLCs were installed.

1993 The dryer tenders were replaced on the 24-section and 20-section dryers with the more advanced design found in the Mike Lloyd temperature differential moisture control system.

3/86 A venturi scrubber was replaced with a new scrubber.

1992 In-house dryer tenders were installed on the 24-section dryer, the 20-section dryer and the 16-section dryer.

1993 Installation of Delta T dryer controls on 24-section, 20-section and 16-section dryers.

1985 Replacement of moisture detector on the 16-section dryer.

6/90 New temperature and pressure control equipment was installed on press No. 1.

1/91 New temperature and pressure control equipment was installed on press No. 2.

5/91 New temperature and pressure control equipment was installed on press No. 3.

5/91 A recorder/controller system was installed on press No. 3.

Installed Grecon spark suppression system on sander system (project completed in 1995).

Installed a core drive on No. 2 lathe (project completed in 1995).

1985 Installation of hold back gates on the vat feed.

1985 Infeed chutes extended in the vat infeed.

2/88 Muffin monsters installed on vats.

2/90 Vat infeed was outfitted.

11/92 Vat outfeeds outfitted.

11/82 Hydraulic positioning cylinders installed all 3 lathe carriages.

Early '88 Three premier lathes replaced with 2 COE lathes.

1992 Installation of a small log lathe.

11/93 A lathe retrofit completed.

11/93 Core drives and XY chargers installed on No. 1 lathe.

1994 No. 1 lathe updated by installation of new probes and PLC controls.

1992 Vat outfeed.

1988 COE lathe replacement.

6/84 Replaced sander, bagfilter

6/88 Sander/specialty saw bagfilter

6/79 200,000 pph woodwaste boiler

6/88	Sanderdust burner @ boiler
6/86	Replaced 96" chipper
6/79	96" logchipper
6/87	Replaced rechipper
6/92	Upgrade dryer controls, 24&20 sect. Veneer dryers
6/93	Upgrade dryer controls, 16 section veneer dryer
6/91	Upgrade press temperature controllers
6/79	Boiler multiclone / scrubber
6/79	Planer shavings cyclone
6/79	Dry waste system (3 cyclones)
6/79	Green chip system with 2 cyclones
6/87	Added rechipper cyclone
6/86	Replaced drum debarker
6/79	Log deck
6/79	10 section veneer dryer
6/79	16 section veneer dryer
6/79	20 section veneer dryer
6/79	24 section veneer dryer
6/83	Microwave re-dryer
6/79	Sander bag filter
6/88	Log vat heat exchangers
6/79	30" dry hog

6/79 42" dry hog

6/79 Dry planer hog

6/87 Removed planer hog and cyclone

6/79 Chip-n-saw machine

6/79 Stud machine

6/79 Planer mill

6/87 Removed planer mill

6/89 Upgrade 10&16 sect. Veneer dryers moisture meters

6/88 Upgrade 20&24 sect. Veneer dryers moisture meters

6/88 4 veneer patchers w/ patch & strip saws

6/83 #1, #2, #3 press conversion - 30 to 33 openings

6/85 #1, #2, #3 press conversion - 33 to 36 openings

6/79 3 30-opening presses

6/79 Finishing sander

6/79 3 centercut fishtail saws

6/87 Removed chip-n-saw & stud machine

6/88 Core saw for end cut fishtails

6/79 Equalizer saw

6/88 Removed 2 center cut fish tail saws

6/88 Sander/specialty saw

6/79 Skinner saw

6/92 Boiler scrubber replacement

6/90 Ash handling system

6/79 Six (6) log vats

2/85 A microwave radio-frequency redryer installed

Monticello, GA Plywood

Late 1980's Resin/glue reformulation

1/18/78 Installed pneumatic relay conveying system for particleboard sanding operation and replaced bag filter with cyclone collector.

5/26/77 Installed pneumatic conveying system to handle hog plywood trimmings.

10/1/78 Installed wet scrubber on boiler.

7/5/78 Installed pneumatic sanderdust relay conveying system from plywood plant sander collector and from panelboard plant.

9/7/88 Installed monitoring system on the scrubbers.

1981 In-house controls added to dryers to form a crude hardwire logic dryer tender.

1985 Wagner 1375 moisture detectors installed to replace Mann Russell moisture detectors.

1988 Superior PMI relay system for the presses was replaced with an Allen Bradley 2/30 PLC

1989 Wagner moisture detectors replaced with Elliott Bay Cypress moisture detectors.

10/80 Heat exchangers installed.

12/88 PLC controls to replace obsolete controls.

Mid '94 Log vat spraying system installed.

8/82 XY chargers installed on No. 1 and 2 lathes.

11/83 New backup rolls installed.

Early '86 New clippers, trays and diverters.

5/87 New roller bars installed.

9/87 New SCR drives installed.

6/88 Backup rolls were replaced.

12/89 Auto gap controls installed

6/91 Boiler ash system upgrade

2/85 NSPS wood-fired boiler w/ multicyclone/scrubber

6/86 Dryer computer controls

6/87 Dry waste cyclone replacement

6/85 Replaced fuel house sanderdust cyclone

6/87 Sanderdust cyclone replacement

6/81 Installed r.f. dryer

6/85 Converted #1, #2, #3 presses from 30 to 34 openings

6/86 One (1) log vat

6/88 Dry waste fuel house pneumatic system w/ cyclone

1978 Coe veneer dryer put in service

11/85 2355.5 mmbtu boiler into service

Monticello, Georgia (Studmill)

1977 Modification and relocation of green sawdust pneumatic conveyor (CP832 Relay) to allow discharge of material to plywood boiler fuelhouse (Pt. #301).

1977 Installation of green sawdust pneumatic conveyor (Pt. #308).

1995 Replacement of existing planer mill pneumatic conveyor and two cyclones with new pneumatic system and one high efficiency cyclone.

Monticello, Georgia (Panelboard)

1988 Rotary dryer replacement

1988 Konus burner replacement.

1993 Dryer blower replacement.

1989 Spare 65 mm press roll purchase.

1994 Installed thin MDF line (projected completed in 1995).

1977 Baghouse for panelboard sander.

1977 Line #1 blender drop-out system.

1977 Line #2 blender drop-out system.

1977 Removal of aerodyne collector from dryer system.

1978 Installation of pneumatic conveying systems #115, 116, 117; modification of system 106.

1993 Hood installation on groove spray system of two finishing lines.

Vienna, GA Particleboard

Late 1980's Resin/glue reformulation

2/25/77 Installed 2 baghouses.

6/13/77 Installed sanderdust pneumatic conveying systems.

1/20/82 Installed hammermill at the trim saw line, new pneumatic conveying system, CD-509 to transport the milled trim to the sanderdust storage bin, new 42"

cyclone for material collection and new cyclone air exhaust connection to existing inlet into Carter Day bag filter.

10/3/83 Modified material storage system (installation of a "Y" in existing 505-B pneumatic conveying system).

10/14/83 Installed new cyclone (CP-505C) and associated sawdust handling system.

12/4/86 Installed material classification system and related material handling equipment, and a new grit and fines removal system.

7/15/87 Modified existing pneumatic conveying system CP-509 including installation of diverter gate and high efficiency cyclone.

Installed new IMAL blenders and 2 high efficiency dryer outlet cyclones to replace existing cyclones (project completed in 1995).

1993 Blenders installed

5/80 Dust burner for #1 boiler

5/80 Dust burner for dryer

11/86 Mcconnell wood burner for face dryer

12/90 2 cyclones-dust system/forming station

10/91 Cyclone pipe work w/ cyclone

10/87 Dust suppression system

11/88 Dust suppression syst-time saver sander

12/90 Hammermill to reclaim wood waste

7/92 Core refiner

9/89 Core refiner

12/90 Face refiner

5/88 Time saver sander

Warm Springs, GA Plywood

Late 1980's Resin/glue reformulation

1980-83 The vat steam plates in vats 1-6 were replaced with heat exchangers.

1980-84 A bulk liquid caustic system was added.

6/84 Metal covers were installed on each vat.

1989 The muffin monsters were removed from vats No. 7 through No. 10.

12/94 The existing pneumatic Foxboro temperature controllers were replaced with electronic controllers.

3/82 Morvue clipper scanners were installed to replace the existing obsolete Tech-Serv clipper scanners.

12/82 COE XY chargers were added to both lathes. The existing obsolete relay control for the lathe and tray system was replaced with a PLC.

8/83 Back-up rolls were installed on both lathes.

7/84 The existing GE tipple and tray drives were replaced with a new Redco Super-Sync drive.

6/86 The existing Elliott Bay clippers were replaced with Durand rotary clippers to improve the clipping accuracy.

6/86 Power roller nose bars were installed on both lathes.

8/86 Strip trays were added.

1986-87 The existing lathe drives were replaced with solid state drives.

6/87 The single bin stackers were replaced with dual bin Durand stackers.

Late '87 The spaces between the lathe trays were plated.

10/87 The lathe back-up rolls were replaced with core drives.

11/87 Both lathe spindle systems were replaced with 5-1/2 inch and 3 inch dual step down systems.

8/90 & 10/90 Auto-gap controls with temperature compensation were added to lathes No. 1 and No. 2.

Late '90 The existing charger reporting terminals and printers were replaced with a single terminal and printer shared by both lathes. At the same time, the obsolete XY charger positioner controls on the lathe were replaced with new controls.

1/95 A clipping trash gate was added to lathe No. 1.

1983 Replaced original press relay systems on No. 1 & 2 presses with Allen Bradley PLCs.

1987-88 Replaced existing moisture detectors on 3 dryers with Elliott Bay Cross moisture detectors.

1992 Installed Allen Bradley PLCs on Nos. 2 & 3 dryers.

1992 Replaced starter on presses with new motor control centers.

1993 Replaced existing Allen Bradley PLCs with new Allen Bradley 5/30 PLC controllers.

1994 Replaced Foxboro pneumatic temperature controller on No. 2 press with Allen Bradley Panel View 2711 panel.

1985 Removed grate blowing system from boiler.

1988 Replaced boiler tubes.

1989 Replaced pneumatic controls for boiler control panel.

1989 Changed sheaves on boiler fan.

1990 Changed ID fan on boiler.

1993 Installed automatic blowdown system.

1993 Repaired boiler.

1994 Modified firebox.

1986 Replaced dryer coils on No. 3 dryer.

1987 Replaced dryer coils on No. 2 dryer.

1993 Changed 30 hp DC drive on No. 3 main drive on dryers to 30 hp AC drive.

1994 Installed condensate return system on dryers.

3/28/77 Installed pneumatic conveying system to handle hogged plywood trimmings.

11/29/77 Modified existing wet scrubber on wood-fired boiler and converted spray-type scrubber to venturi-type scrubber.

6/79 Convert #1 & #2 presses from 36 to 40 openings

6/85 Convert #1 & #2 presses from 40 to 42 openings

6/79 Scrubbers

6/83 2 log vats

6/88 2 log vats

3/78 New dryer (no. 1) was installed

6/79 Boiler w/ scrubber installed

Woodland, ME OSB

1987 Conversion from Waferboard to OSB

1995 2 dryer drums and 2 burners replaced

1982 Installation of log and panel handling systems.

1984 Installation of flaker and screens.

1989-90 Installation of bins and hot ponds.

1986 Installation of stack gas economizer.

1988 Press platens modification.

1988 Dryer drum replacement.

1985 Wood fires storage bin vent filter and replacement of bag filter for fugitive dust.

1980 Construction of facility

11/82 Three (3) bag filters on pneumatics

3/87 One (1) bag filter on bin vent

9/88 One (1) ESP on flake dryers

Woodland, Maine (Chip-N-Saw)

1979 Permit modification to delete opacity monitor requirement.

1995 Log line modifications.

1995 Planned green end upgrades.

Gloster, MS Plywood

1/77 Installed woodwaste boilers and cyclones.

9/79 Installed green chip cyclone.

1/82 Enlarged the blow-pipe.

11/81 XY charger installed on No. 2 lathe.

7/83 XY charger and high speed spindles installed on No. 1 lathe.

9/83 Backup rolls installed on both No. 1 and 2 lathes.

1/84 4' lathe removed from service.

9/86 A powered roller nose bar installed on No. 1 and 2 lathes.

4/89 Laser scanner conversions made on No. 1 and 2 lathes.

12/90 Auto gap control installed on No. 2 lathe.

2/91 Auto gap control installed on No. 1 lathe.

10/78 Chip truck bin

6/89 Dryer temperature & moisture controls

10/78 Chip truck bin cyclone

10/92 Sanderdust high-efficiency cyclone

6/86 High moisture glue system

6/88 30 opening hot press

6/80 Convert #1 & #2 presses from 24 to 30 openings

6/81 Convert #3 press from 24 to 30 opening

6/84 Center cut fishtail saw

5/82 Specialty saw

6/84 2 eight foot log vats

Grenada, MS OSB

1987 Modified pneumatic conveyor.

1991-92 Dryer replacement of drums as like kind replacements.

1989-90 Press loader cage and loader arm.

Installed dedust system (project completed in 1995).

1985 Two new pneumatic conveying systems.

1985 Construction of facility

11/88 One (1) suspension burner for thermal oil heat exchanges with cyclone collector

8/90 One (1) paint spray booth

4/91 One (1) bag filter for pneumatic conveying system

9/92 One (1) ESP installed on flake dryers

Louisville, MS Plywood

Late 1980's Resin/glue reformulation.

9/77 Installed scrubber and fly ash reinjection system.

6/20/79 Installed multicyclones and scrubber.

1986 Installed Allen Bradley PLCs on dryers.

1989 Replaced original press relay systems with Allen Bradley PLCs.

1979 Installed boiler.

1986 Replaced continuous blowdown system on boiler.

1989 Installed new exhaust scrubber and ID fan on boiler.

1992 Installed larger ID fan on boiler.

1989 Replaced loader and unloader on presses 2 & 3.

Replaced the core chipper and lilypad chipper (project completed in 1995).

1980 Changed lathe tray system.

1981 Changed Unico lathe drive system and COE XY charger on No. 1 lathe.

1983 Installed two back-up rolls on lathes.

1984 Replaced manual stacker on No. 1 lathe tray system with double stacker.

1985 Installed XY charger and high speed spindles on No. 2 lathe

1986 Installed two roller nose bars on lathes.

1986 Changed rotary clippers.

1990 Converted laser scanners on two lathes and installed autogap controls on lathes 1 & 2.

5/79 Boiler installed

6/88 Dryer controls/moisture detectors

11/92 General plant cyclone - replace

5/82 Skinner saw cyclone

10/84 T&G/specialty saw cyclone

6/87 #3 boiler economizer

6/89 Dry hog at skinner saw

6/88 30 opening hot press

6/78 Converted 24 opening to 30 opening press

6/79 Converter 24 opening to 30 opening press

6/80 Converted 24 opening to 30 opening press

6/84 Center cut fishtail saw

6/86 Plug saw

5/82 Skinner saw

10/84 Specialty saw

6/89 Replaced #3 boiler scrubber

6/88 Added two log vats

Louisville, MS Particleboard

Late 1980's Resin/glue reformulation.

1994 Replaced dryer drums on core and face dryers and replaced cyclones on core and face dryers with high efficiency cyclones

5/84 Bauer Refiner

1/93 Bauer outfeed system to dryer

1/83 Blower system for sander

12/84 Wood burner

10/90 Former dust control

8/80 Board cooler

12/78 Dryer area dust control system w/ cyclone

1/93 Sander dust cyclone

6/87 Dryer drum replacement

6/84 Cut-up line

6/84 Mac system (removed 7/91)

12/85 Measurex monitoring system

1/93 Pallman outfeed to dryer system

5/84 High pressure pneumatic system w/ bagfilter

1/93 Resin additive system installed

12/89 Two head sander air system

12/89 2 heads added to sander w/ air system

1/83 Sander system modification

11/87 Superfines system with baghouse

2/88 Dust vacuum system west side

Oxford, MS - Paticleboard

Late 1980's Resin/glue reformulation

10/17/77 Installed high efficiency pneumatic cyclones for fugitive dust collection at dryer system conveyor belts.

3/16/78 Removed cyclonic-like skimmer from the dryer system.

Replaced the boiler dust collector and installed high efficiency dryer cyclones to replace existing conventional dryer cyclones (project completed in 1994).

6/86 TM (face) blender upgrade

6/84 CM (core) blender upgrade

6/89 TM (face) overs reflaker (#3 pallman), cyclone

6/86 Overs conveyor discharge system, cyclone x

7/78 #2 slat bed bed saw, #2 brd trim hog, cycl/bagfilter

6/86 Upgrade sanderdust storage, cyclone

6/90 Dry residuals truck dump

6/84 Board emission test room

6/80 Phase II boiler/dryer energy conservation

6/79 Phase I boiler/dryer energy conservation

6/84 #2 pallman flaker addition

6/86 Board thickness gauge

6/81 Furnace combustion air pre-heater

6/90 Edge glue (scarf) machine - underlayment

6/81 Press feed upgrade

6/79 Panel saw set-up revision

6/86 Face material formaldehyde scavenger system

6/80 Furnace fuel storage shed

6/81 Upgr fines pneumatic system (cycl/bagfilter/conv)

6/88 Core material formaldehyde scavenger system

6/79 Screen area fugitive dust system

Taylorsville, MS Particleboard

Late 1980's Resin/glue reformulation

4/90 Forming Clean Air System

9/92 Cyclone & Baghouse-Countertop/Multiscore/Bullnoze

12/85 Reject Material Baghouse

6/81 T&G Bagfilter

6/88 Bauer Feed Material Bins

6/88 Fine Material Feed Bin

6/85 Accuray Forming & Blending Control Syst.

6/79 Replaced Board Cooler

12/90 Bauer Cyclones

6/90 Modified Face Dryer Cyclone (Incl. W/ Bauer)

6/89 Enclosed Truck Dump

6/90 Added 2nd Hog

6/85 Installed 3rd Bauer Milling Machine

6/88 Installed 4th Bauer Milling Machine

6/92 Installed 5th Bauer Milling Machine

5/84 Bullnoze Shelving Machine

6/88 Bolster (Sticker) Machine

7/81 Sander Kimwood

6/84 Countertop Saw Line/Dust Rem. Equip Cyclone

6/86 Holzma Saw

6/86 Multiscore Saw

6/88 Screens

6/89 Enclosed Shavings Silos (3) (Incl w/ Bauer)

10/81 T & G Machine

8/3/77 Installed 4 cyclones.

6/9/89 Installed new 12' cyclone as part of "Face Material Cooling Project" and replaced Carter Day baghouse 72RJ48 with 72RJ96.

4/19/90 Installed air emissions control equipment on the COE 6-head sanderdust baghouse.

Installed 2 additional sander heads (project completed in 1995).

2/86 bauer mill no. 3

11/87 bauer mill no. 4

7/93 bauer mill no. 5

Taylorsville, MS Plywood

Late 1980's Resin/glue reformulation

10/86 Installed specialty machine including air emissions and pollution control equipment.

3/13/90 Replaced existing cyclone with fabric filter.

7/93 Replaced wet scrubber on Boiler No. 3 with electrostatic precipitator.

1982 Installed unloading equipment on all 4 dryers.

1982 Installed Texas Instruments PLC on three presses.

1988 Installed Elliott Bay Cypress moisture detectors on 4 dryers.

1990 Installed automated hardware on 3 of 4 presses.

1993 Replaced Texas instrument 550 PLC on four presses with four Texas Instruments 545 PLCs.

1994 Replaced Texas Instrument 525 PLC on four dryers with Texas Instrument 545 PLCs.

1980 Replaced ID fan on No. 1 boiler.

1994 Installed Hy-Hoe log lifters on vats.

1982 Installed XY chargers on lathes.

1984 Installed SCR drives on lathes.

1987 Installed high speed lathe spindles and nose bar on lathes.

1989 Laser scanner conversion on lathes.

1990 Installed roller nose bar and auto gap control on one of three lathes.

8/90 Replaced panel sander/bagfilter

9/89 Baghouse for the 2 head sander

8/86 Specialty saw bagfilter

12/79 Manual dryer dampers #4

8/89 Delta t controls on dryers 1,2,3 & 4

12/79 #4 veneer dryer

10/86 30 opening press

12/79 Convert press #1,2,3 from 24 to 30 openings

12/89 Convert press #1,2,3 from 30 to 36 openings

12/80 Boiler #1 scrubber

8/87 Boiler #3 scrubber replacement

12/87 1 log vat

12/89 Converted press #4 from 30 to 36 openings

4/78 Installed #3 wood fired boiler

Dudley, NC OSB

1980-82 Conversion from Comply to OSB.

1982-83 Installed Wet ESP.

1981 Installed cyclone collector in pneumatic conveying system.

1986 Installed diverter valve for green wood chip pneumatic conveying system.

1979 Installed 3 bag filters.

Original facility construction No.s 1 and 2 dryers installed
1982 No. 3 dryer installed

1993 Replaced drum

1994 Replaced no. 1 and 2 dryers

Dudley, NC Plywood

Late 1980's Resin/glue reformulation

Plant was originally constructed in 1978.

2/11/81 Installed cyclone collector on pneumatic conveying system.

1/17/86 Modified existing pneumatic conveying system including installation of diverter valve in pneumatic pipe to allow wood chips to be diverted from existing truck loading bin cyclone collector to the rail loading cyclone collector.

2/27/86 Installed air cleaning device consisting of transfer cyclone.

5/14/92 Installed cyclone on ply-trim operation.

1988 Installed Elliott Bay Cypress moisture detectors on three dryers.

1990 Replaced steam and pressure gauges on presses with Honeywell circular short recorders.

1992 Upgrade Allen Bradley PLCs on presses to newer model.

1986 Installed new clipper and tray system on lathe.

1986 Installed super sync system on lathe.

1988 Replaced existing lathe chargers on No. 1 lathe with new ones.

1989 Installed new autogap control.

1989 Installed new No. 2 lathe.

1990 Green end modernization with autogap controls on No. 1 lathe

1994 Installed core drive on No. 1 lathe.

1/80 Boiler ash system

1/80 Wood-fired boiler

1/80 Rechipper

1/80 Boiler multiclone / scrubber

1/80	Fishtail saw cyclone
6/86	Pine chip rail loading cyclone
1/80	Pine chip truck loading cyclone
1/80	Rechipper cyclone
1/80	Two ring nicholson debarker
3/89	18 section veneer dryer
1/80	16 section veneer dryer
1/80	24 section veneer dryer
12/90	Delta t dryer controls
4/86	12 section dryer
11/92	Pneumatic upgrade
11/92	Press fast close
6/87	#1, #2 press conversion - 40 to 42 opening each
1/80	Two (2) 40 opening presses
1/80	Plywood sander
1/80	Specialty saw single-head sander (system #3)
1/80	Single head sander on t & g machine
1/80	Fishtail saw
1/78	Glueline core saw
11/83	Glueline flying saw
1//80	Specialty saw (system #1)
1/80	Globe skinner saw sawline

4/89 Boiler scrubber replacement

1/80 Globe T&G siding machine

1995 Dryer modifications

12/89 #3 skoog machine

11/83 #2 skoog machine

1/80 #1 skoog machine, strip saw, radial arm saw

1/80 Dry fuel system (system #8)

1/80 Dry trim system (system #1)

1/80 Plywood sander dust system

1/80 Specialty/T&G sander system (system #3)

12/85 One (1) log vat

1/80 Four (4) log vats

1/89 Two (2) log vats

Dudley, North Carolina (Chip-N-Saw)

1977 Installation of pneumatic conveyor and 48" planer shavings cyclone at boiler fuel house.

1977 Installation of pneumatic conveyor and 84" chip cyclone at train bin.

1977 Installation of pneumatic conveyor and 48" planer shaving cyclone at planer shavings bin.

1977 Installation of pneumatic conveyor and 84" chip cyclone at truck loading bin.

1984 Installation of chip screening equipment and conversion of existing low pressure pneumatic system to high pressure system (Emission Pt. 42).

1991 Installed multicyclone collector on woodwaste fired boiler and cyclone collectors on the 58" and 66" chippers.

Whiteville, NC Plywood

1981 Installation of vat recycling system

1979 Installed multiclone and scrubber on wood-fired boiler.

1982 Replaced piping and repaired cyclone for ply-trim pneumatic conveyor (System #CP-605).

1983 Removed No. 2 oil-fired boiler from service.

1984 Modified pneumatic conveying systems for sander, specialty saw, and tongue and groove machine.

1993 Began use of waste oil as boiler fuel as permitted by State.

1981 Existing Mann Russell moisture detectors replaced with new Ward moisture detectors.

1982 Replacement of relay controls on 2 presses with a PLC system.

1983 Ward moisture detectors replaced with Wagner moisture detectors.

1985 Allen Bradley 2/15 PLCs installed on the dryers to replace the deteriorating relay control system.

1986 In-house PLC 2/15 controlled dryer tenders installed.

1986 Wagner moisture detectors replaced with Elliott Bay Cypress moisture detectors.

1993 Allen Bradley 5/20 dryer PLCs installed.

1993 Foxboro temperature controllers on Presses No. 2 and 3 replaced with Honeywell controllers.

1994 Press No. 2 PLCs (installed in 1982) replaced.

12/77 COE 14-section dryer put into service.

Late '90 Steam and condensate collection system restructured to accept kiln condensate from the kilns at the adjacent CNS facility.

Late '93 to mid '94 Series of boiler repairs undertaken to reduce particulate emissions. These changes involved repairs to the scrubber system.

12/88 Loaders/unloaders were replaced on the No. 1 and No. 2 presses with like-kind units.

1981 Vat water steam coils replaced with exterior steam heat exchanger with controls to maintain vat water temperature. The vat water recycling system built to recycle vat water in a closed treatment system.

1982 XY chargers installed on both lathes.

6/84 High speed spindles installed on the lathes.

1986-87 Series of steps taken to improve the green end operations. This included installation of 2 clippers and 4 tray systems. Two new roller bars installed during this time. In addition, 2 new lathe drives installed to reduce the amount of time to load each block.

12/89 Auto gap controls installed on the lathes.

1994 Two core drives installed on the lathes.

1981 Vat steam heat exchanger installation.

6/88 Boiler shoot blower

6/85 NSPS boiler, scrubber & ash system

6/85 NSPS boiler multiclone

6/86 High moisture glue system

6/81 Installed 30 opening hot press

4/86 Convert press #1,2,3 from 30 to 32 openings each

6/88 Installed old single head sander-specialty machine

6/86 Upgraded sander dust system

6/85 Replace board sander

6/88 Replaced single head sander & t&g machine

6/85 Single-head sander and T&G machine

6/84 One (1) log vat

6/88 One (1) log vat

Whiteville, North Carolina (Chip-N-Saw)

1981 Installation of chip screening equipment and 2 sawdust pneumatic conveyors.

1987 Installation of edge trim chipper and cyclone.

Holly Hill, SC MDF

1989 Replaced 7 silos with green chip and plytrim storage equipment.

1982 Installed dust burner.

Installed EP and heat exchanger on boiler (project completed in 1995) and replaced baghouses with 2 pneumatic filters (project completed in 1994).

1992 Installed pre-sander.

1978 Pendista formers and related pneumatics (replacement)

6/82 Coe sander 5' - no additional emission permit

8/84 Long bodied cyclones and air locks were added to the flash tube dryers

1982 A closed looped reject system with a pneumafil bag house and classic system air lock

1985 Rotex classifier, montgomery bag/blower and cyclone, raw material to refiner

12/87 Kmw, 8'x26' press (replacement), 1-46 refiner/dump cyclone, and two globe saw

systems/, pneumatic system (pneumafil bag house, surge bin, air lock, and feeder)

9/88 Fire in the silos caused some rearrangement of the pneumatic piping in the woodyard

8/92 Kimwood sander/pneumatic system 31,000 cfm (pneumatic feeder, blower)

12/94 Two westec double-pass flash-tube dryers installed

Holly Hill, South Carolina (Pine Sawmill)

1981-82 Band Mill refurbishment.

1983 Chip-N-Saw line installation.

1982 Shutdown of sawmill boiler - steam demand shifted to MDF boiler.

1986 Installation of lattice and cut-to-length equipment.

1989 Replacement of planers, planer mill cyclones.

1994 Installation of small log line.

Prosperity, SC CHIP-N-SAW

Early 1996 Shutdown of chip-n-saw boiler and use of plywood plants boiler

1987 Chip-N-Saw woodwaste boiler permit entry transferred from plywood plant permit to chip-n-saw permit.

1981 Green sawdust blowpipe installed at boiler.

1992 Permit modification to allow waste oil combustion in boiler.

3/87 60,000 BTU/HOUR Wood-waste fired boiler

Prosperity, SC Plywood

8/89 Installed exhaust diverter valve on existing plywood trim pneumatic conveyor to allow hog plywood trim to be diverted to the new railcar loading station.

4/14/92 Installed specialty saw and sanderline.

1981 Original hardwire relay logic control system on the 24-section dryer was replaced with an Allen Bradley 2/15 PLC.

1984 The original hardwire relay logic control system used to control loading and unloading on the 12-section dryer was replaced with an Allen Bradley 2/15 PLC.

1987 Original press hardwire relay logic control systems were replaced with Allen Bradley 2/30 PLCs.

1988 Original dryer hardwire relay logic speed control system for the 12-section dryer was replaced with an Allen Bradley 2/15 PLC and the moisture controls used to control veneer moisture content were also replaced.

1992 Rebuild of plant including installation of Allen Bradley 2/30 PLC on the rebuilt No. 1 press, installation of an Allen Bradley 2/30 PLC on the replacement No. 2 press which was larger than the original No. 2 and installation of Allen Bradley 5/20 PLCs on the rebuilt 24-section and 12-section dryers.

3/87 The 60,000 Btu/hr. CNS boiler, originally installed in 1973, was transferred from the plywood facility permit to permit for adjacent CNS facility.

3/88 Elliott Bay Cypress moisture detector systems were installed on both dryers to replace the existing Ward moisture detector systems.

6/89 The DC motor drives were changed to AC motor drives.

6/92 No. 1 press had to be rebuilt. During the process, the loading/unloading mechanism was changed from a mechanical "lug" activator system to an electronic quadrature encoder system and the mechanical variable pressure setting knob was replaced by an electronic proportional relief valve system controlled by an Allen Bradley PLC 2/30.

6/81 Expansion of No. 1 press.

Between7/80 & 1/83 3 muffin monsters were installed on the vats.

10/87 2 additional vats (double vat) were installed with external heat exchangers.
1/88 1 muffin monster installed on a vat.

1991 All muffin monsters were removed except for 1.

1981 A spindle conversion made on No. 1 lathe.

11/82 Back-up roll conversion made on No. 1 lathe to replace the existing back-up roll.

9/83 Computer program used to drive XY chargers changed to handle smaller blocks.

1/85 A powered roller bar installed on No. 1 lathe.

1/86 The Elliott Bay anvil clipper replaced with Durand rotary clipper with a strip tray installation.

2/86 The Morvue Infra-scan option for the Durand rotary clipper was added.

11/86 Lathe motor generator set replaced with SCR lathe drives.

6/88 The COE C4S back-up roll replaced with a Calvert back-up roll - 6 weeks later removed and original COE C4S reinstalled.

1989 A temperature compensating/heat sensor auto gap adjustment installed.

11/92 Lathe rebuilt due to fire.

12/94 Lathe carriage drive conversion completed.

1/95 High speed spindle conversion and core drive installation including replacing the PLC 2/30 with a PLC5.

12/85 High moisture adhesive

3/89 NSPS wood-fired boiler

6/92 Dryer speed/moisture computer controls

6/92 Dry waste rail cyclone replacement

10/78 Replaced dry waste bagfilter w/ high eff. Cyclone

6/92 Replaced dry waste high efficiency cyclone

9/92 Dry waste rail car loading system w/ cyclone

10/78 Replaced sanderdust bagfilter w/ multicyclone coll

12/86 Upgraded dryer steam coils 24 section dryer

9/89 Converted #2 press from 30 to 34 openings

6/83 Installed 30 opening #2 plywood press

6/81 Convert #1 press from 36 to 40 openings

5/85 Specialty saw

6/83 One (1) log vat

12/87 One (1) log vat

6/92 Superior 40-openings press #2 installed

Russellville, SC Particleboard

Late 1980's Resin/glue reformulation

1/24/77 Installed 1 Pneumafil Model 8.5 - 124 - 8 and 1 Pneumafil Model fabric filter for collecting sanderdust emission from existing pneumatic conveying systems.

7/18/84 Replaced existing pneumatic conveying system with system of slightly higher capacity including larger fan, blowpipe and cyclone.

Early '86 Replacement of sanderdust burner, wood fuel feed system and installation of replacement controls. Also installation of new baghouse.

Late '90 thru 6/91 Repairs to existing boiler - including repair to rear boiler walls, steam line and screw feeding system. Also variable speed control installed for ID fan and sanderdust bin drag chains and head roll re-positioned.

1993 Core and face dryer cyclones replaced with Fisher Klosterman high efficiency dual cyclones to replace outdated and worn equipment.

12/92 Sanderdust transfer system bagfilter

6/85 Replaced asm bagfilter

10/90 Sanderdust bin bagfilter

5/91 Former & de-dust bagfilter

8/85 Blending & forming line de-dust syst. W/ bagfilter

10/90 2 head pre-sander bagfilter

10/90 2 head pre-sander

12/81 Kimwood sander baghouse/cyclone

6/80 #3 bauer

12/86 Boiler bagfilter

4/87 Enlarged boiler bagfilter

5/91 Improved boiler fuel feed

12/86 Boiler sanderdust burner upgrade

5/91 Cp 211 dust collection system upgrade

6/88 Upgrade press control system

11/92 Dust pickup system, bin & scale

6/84 Replaced pallman refiner w/ bauer mill

6/79 Measurex forming line system

6/88 Fiber milling modification - #5 & #6 bauers

11/92 Former & de-dust bagfilter heaters

12/91 Former and de-dust cyclone, bagfilter

6/89 Quadra-beam moisture gauges @ blender

6/90 Quadra-beam moister gauges @ woodyard

8/90 Replaced planer mill pneumatic system

6/92 Scavenger resin system & 4 chamber system

6/92 Resin/scavenger tank & house

6/92 Mat compression roll

9/92 Sanderdust transfer system

6/88 Sander thickness gauge

6/91 Statistical process control system

3/88 Superfines system w/ bagfilter

Russellville, SC Plywood

Late 1980's Resin/glue reformulation

9/20/82 Began burning waste oil as a supplemental fuel source in wood-fired boiler as permitted by State.

3/17/93 Replaced dry waste cyclone.

1978 The existing moisture detectors had to be replaced on two of the dryers with new Ward "moisture logic" Model 220C detectors.

6/84 The facility replaced the relay controls on two presses with a PLC system.

1986 The Ward moisture detectors were replaced with new Elliott Bay Cypress moisture detectors.

1987 Allen Bradley 2/15 PLCs were installed on the three dryers to replace the deteriorating relay control system.

1988 In-house controls were added to the dryers to form a crude hardwire logic dryer tender which in effect was a programming step for the dryer PLCs installed in 1987.

1994 The dryer tenders were again replaced with the more advanced temperature control system.

9/77 The 16-section dryer was installed.

12/85 The original facility boiler underwent several changes to replace worn equipment and increase combustion efficiency. These replacements included installation of a new flash tank, new feed water gear and valving, new rotating element for the I/D fan and new blower.

5/86 The DA tank, where boiler water is conditioned, was replaced.

1989 The new boiler was repaired. These repairs included replacing the front ash disposal system and installing heat exchangers.

1/86 The existing press loader and unloader were replaced because the existing units were obsolete.

5/89 The power unit for the No. 1 press was replaced because the cost to repair the existing unit was higher than the cost of a new one.

12/81 A new log vat was installed.

12/85 Log vat heat exchangers were replaced in 3 vats.

1/88 Two new heat exchangers were installed on the vats to replace existing units which did not have the capacity to maintain desired temperatures.

Early '80 The No. 1 lathe was rewired and the drives on the No. 1 and No. 2 lathes were replaced due to poor condition.

9/80 The facility installed a COE lathe charger and associated hardware.

6/83 A new COE XY charger was installed. At the same time, the facility also installed 2 new back-up rolls to improve veneer recovery and reduce raw material cost.

8/85 Two Super Syncs were purchased for the lathes to improve log recovery.

1985 Two roller bars were installed to improve veneer recovery.

6/87 A new SCR lathe drive was installed.

12/86 One core and tray system were replaced.

6/87 Two roller bars were installed on the lathes.

1987 The obsolete Unico Super Sync system on the lathe was replaced.

2/88 A deck was installed in the tray system.

12/86 NSPS boiler ash system

12/86 NSPS boiler multicyclone, scrubber

8/92 Dry waste truck loading cyclone

12/86 Skoog veneer patchline w/ cyclone

12/81 Upgrade dry waste transport system

12/79 Chip truck loading bin

1/84 30 opening press for 9'/10' board

10/89 Removed 9'/10' board press from service

6/87 Convert press #1,2,3 from 24 to 30 openings

12/86 Single head sander at T&G machine

1/81 Time saver sander

6/84 2 log vats

12/85 Upgrade dry waste transport system

Emporia, VA Plywood

Late 1980's **Resin/glue** reformulation

7/93 Modified existing plywood production facility by relocating the truck loading bin, installing a negative pressure system to move the material to one drop-out point using a Carter Day or equivalent bag filter, and conveying the chips to the bin with a chain or belt.

1983 Installed PLC system on No. 2 press.

1984 Replaced original relay system with Allen Bradley PLC on No. 1 press.

1985 Replaced Mann Russell moisture detectors with Wagner types.

1986 Installed Allen Bradley PLCs on dryers.

1987 Replaced Wagner moisture detectors with Elliott Bay Cypress types on Nos. 2 and 3 dryers.

1992 Replaced Wagner moisture detector with Elliott Bay Cypress type on No. 1 dryer.

1994 Upgraded PLC systems on Presses 1, 2 and 3.

1987 Boiler repair.

1993 Replaced heat exchangers on boiler.

1994 Boiler fuel cyclone replaced with high efficiency cyclone.

1994 DA tank on boiler replaced with larger tank.

1980 Removable tarps installed on log vats.

1980 Installed heat exchangers on vats.

1985 Installed two roller bars on lathes.

1986 Added two rotary clippers and two roller nose bars on lathes.

1987 Replaced lathe drives.

1987 Installed new trays.

1988 Replaced lathe chargers.

1994 Installed core drives.

12/79 Installed dry waste truck loading bin

7/78 New wood-fired boiler

12/79 Dry waste truck loading cyclone

6/78 New boiler multicyclone, scrubber, ash system

11/78 14 section veneer dryer

2/86 Skoog veneer patcher

11/87 2 press openings a- press #1 & #2

10/83 40 opening press

12/86 Sander head on T&G machine

12/85 Flying saws (2)

10/83 Fishtail saw

10/83 Rough saw

5/88 Boiler scrubber upgrade

10/83 Skoog veneer patcher

10/83 2 log vats

Skippers, VA OSB

1986 Installed log and panel handling equipment.

1987 Installed thermal-oil burner.

1991 No. 3 dryer drum replaced.

1993 Dryer drums 1, 2 and 4 replaced.

1985 Construction of facility

1/89 One (1) wellons wood/bark fuel burner exhausting through existing multicyclones (for thermal oil heat exchangers) then exhausting through existing ESP

8/87 One (1) paint spray booth

South Boston, VA Particleboard

1995 Installed feed hopper and conveyors and modified the No. 2 TM dryer

3/30/77 Replaced existing cyclone with new Pneumafil bag filter.

3/30/77 Two phase construction of the N3A project:

Environmental portion and associated dryer modifications, flaker additions.

Modification to press forming line and addition of 1 flaker (including cyclone).

5/9/85 Installed baghouse off of existing cyclones.

10/2/85 Constructed laboratory and pilot plant. Equipment included: 1 electric particleboard dryer, 1 Rotex screen, 1 glue mixing station, 1 hydraulic hot press, 1 muffle furnace, sanding and sawing equipment and 1 bench hood.

6/27/88 As part of Phases I and II of the facility upgrade, added a screen and 2 small high pressure systems (1 CM and 1 TM).

9/22/88 Modified TM Pallman Air system and installed new TM sawdust system.

6/28/90 Added bags to existing baghouse which services the Globe Panel Saw and replaced existing dust pickup fan with new unit.

3/31/92 Converted split conveyor 06-19 into 2 conveyors.

4/20/92 Modified wood dust collection system including installation of new cyclone. Also enclosed screw conveyor from the new cyclone to existing storage silo and emergency dump system for the ADCE link.

5/7/92 Installed emergency replacement boiler for the existing Keeler 35,000 lb/hr. boiler.

1/28/93 Began testing dust suppression chemical as permitted by State.

4/2/93 Relocated a SLR saw as permitted by State.

4/2/93 Modified planer shavings system and removed an existing hammermill and screener.

SCHEDULE D

SUPPLEMENTAL ENVIRONMENTAL PROJECTS

I. General Conditions.--

A. G-P agrees to undertake the following supplemental environmental project(s) ("SEP(s)"), at an aggregate cost of $4.25 million in accordance with Section VIII, paragraph 50 of this Consent Decree. Each SEP described in Sections II, III and IV below includes a schedule for development and implementation. G-P agrees to report to EPA on a quarterly basis on the progress of its implementation of these SEPs in accordance with Section V, paragraph 45 (e) of this Consent Decree, including any information obtained by G-P during development or implementation of any of these SEPs which would materially affect the success of the SEP.

B. Under this Consent Decree, G-P shall enter into contracts with non-profit agencies to carry out certain SEPs described in Parts II through IV below. As part of such contracts with a non-profit agency, G-P shall require the non-profit agency to submit to G-P and to the United States a proposed work plan setting forth in detail schedules for implementing any such SEP, including dates for submission of all interim and final reports to G-P and the United States. G-P shall report to the United States upon learning that any non-profit agency will fail or has failed to meet the schedlule under its contract with G-P. The contracts between G-P and the non-profit agency shall specify that the obligations of the non-profit agency shall be enforceable by G-P and the United States. If G-P acting in good faith is unable to obtain any contracts required by Parts II-IV below that meet the requirements of this paragraph within the deadlines specified below, then the deadlines for the obtaining of those contracts and any subsequent related deadlines shall be automatically extended, and the parties shall work together to locate a suitable non-profit agency [or agencies] to carry out the projects identified in this Schedule D.

B. G-P may submit a request to EPA for approval of any proposed changes to an approved SEP, and EPA shall have 15 business days to respond to the request. Resolution of any disputes arising in the context of G-P's SEP implementation will be handled in accordance with Parts X and XI of this Consent Decree.

C. In the first quarterly report following completion of each SEP, G-P shall submit to EPA for approval a Final SEP Report containing the following information:

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To: Pat Kennedy
From: Wendell Reed
Phone # 404/347-2904
Fax # 904/922-6979

1. a narrative description of the development and/or implementation of the SEP;

2. a final cost documentation for the SEP;

3. a certification that the SEP has been completed in accordance with the plans set forth in Sections II, III, and IV below, or as modified with EPA approval.

II. Southern Appalachian Mountains Initiative ("SAMI") Implementation. --

A. G-P agrees to undertake the following projects identified in the context of the Southern Appalachian Mountains Initiative ("SAMI") as provided in Paragraphs II.B. and II.C. below. The purpose of this SEP is to improve air quality in the Southern Appalachian ecosystem. G-P agrees to use best efforts to conclude this project and deliver, or have SAMI deliver on its behalf, a final written report on the completion of the projects funded according to Paragraphs (1)-(4) below to the United States. G-P shall require, as a condition of transfer of any funds to SAMI, that SAMI provide appropriate verification at the conclusion of each project identified in Paragraphs (1)-(4) below that the funds were spent in accordance with these conditions. The project shall include the following components:

(1) airshed modeling of the environmental benefits of different general air pollution control scenarios in the Southern Appalachian Mountains. G-P agrees to fund this project at a level of $200,000.

(2) preparing baseline and projected emission inventories for Clean Air Act and for various emission management options ("EMOs"). G-P agrees to fund this project at a level of $345,000.

(3) modeling to relate the changes in air quality due to the Clean Air Act and EMOs to effects benefits. G-P agrees to fund this project at a level of $300,000.

(4) refining and implementing the specific EMOs listed in this paragraph. G-P agrees to fund this project in the aggregate amount of $155,000:

(a) establishing a demonstration project (SAMI EMO #8) to reduce mobile source emissions in or near Class I National Parks within the Southern Appalachian Mountain region;

(b) undertaking an examination of various fuel formulations and alternative fuels (SAMI EMO # 88) in the Southern Appalachian Mountain region to compare different fuels' emissions and performance, and identify cost effective incentives; and

(c) implementing an electronic air emission database (SAMI EMO #89) for use by Federal Land Managers and SAMI permitting authorities.

B. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency to implement the environmental projects identified in this Part II on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall transfer $1,000,000 to the non-profit agency to fund the projects.

C. G-P agrees to condition the transfer of the funds to SAMI upon SAMI's agreement that none of the funds will be used by SAMI for administrative or other overhead expenses. In addition, G-P must specify in its agreement with SAMI that one or more of the projects being undertaken on G-P's behalf under Paragraph II.A above must result in the identification of sources of NOx emissions within the Southern Appalachian Mountain region that may be candidates for the generation of NOx offsets for the purposes of either the "Offset SEP" addressed at Section III of this Schedule or other similar offset purposes.

D. To the extent that all tasks under this SEP are not completed within four (4) years from the date of entry of this Consent Decree then the remaining portions of the SEP funds shall either be expended to the conclusion of the SEPs or be re-directed to a different SEP as agreed upon by the United States and G-P.

III. Acquisition of Permanent Nitrous Oxides ("NOx") Offsets Project.--

A. G-P agrees to perform this SEP for the acquisition of permanent reductions of NOx emissions from facilities located in the southeastern United States as provided in Paragraph III.B. below. The purpose of this SEP is to reduce emissions which contribute to the formation of ground level ozone that is detrimental to human health and the environment. Ozone has been identified as a particular problem in the Class I attainment areas in the Southern Appalachians.

B. This SEP requires G-P to pay for the installation of pollution control devices or the implementation of pollution prevention projects on or at facilities that are near the Southern Appalachian Class I areas that are significant sources of NOx emissions. G-P will pay for the equipment to "over-control" or to implement pollution prevention projects to reduce NOx emissions coming from one or more of these facilities so as to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P

to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P facilities are located.

1. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency (hereinafter any non-profit agency with which G-P enters into a contract pursuant to Parts III and IV shall be referred to as a "selected non-profit agency") to implement the environmental project identified in this Part III on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall deposit $2,750,000 in an interest bearing escrow account established specifically for the purpose of obtaining permanent NOx emissions offsets as specified below in this Part III. None of these funds may be used to pay for administrative or other overhead expenses by G-P, the selected non-profit agency, or other entities participating in this project.

2. G-P will participate, as necessary, with the selected non-profit agency, or other interested government agencies and other interested parties in attempts to locate acceptable sources of NOx offsets. To the extent practicable, SAMI emissions data, including the data produced under Sections II and III above, will be used in locating and selecting offset generators. Additional sources of emissions data can be obtained from the National Parks Service and the U.S. Forest Service.

3. G-P will work with SAMI to use best efforts to locate more than one, but not more than five, qualifying projects with as many tons of NOx offsets as is practicable. To the greatest extent practicable, in the selection process, G-P shall require in its contract with the selected non-profit agency that priority be given to potential offset generators that meet the criteria set forth in this Section. G-P shall also require in its contract with the selected non-profit agency that preference be given to NOx generators that make additional contributions to the cost of the emissions reduction project, such as agreeing to pay a percentage of the initial purchase price of air pollution control technology or a percentage of the operation and maintenance costs of the equipment. G-P shall also require that in its contract with the selected non-profit agency that best efforts be used to ensure that offsets acquired are purchased at the lowest reasonable price.

4. G-P will arrange with the selected non-profit agency to use best efforts to obtain offsets as near as possible (within 100 kilometers) to the following Clean Air Act Class I attainment areas: Shenandoah, Great Smoky Mountains, James River Face, Linville Gorge, Shining Rock, Joyce Kilmer/Slickrock,

Cohutta, or Sipsey. The United States agrees that offsets shall not be obtained for the purpose of this SEP from G-P's competitors nor have an adverse effect on G-P's competitive position.

5. G-P shall require in its contract with the selected non-profit agency that any NOx generator seeking to qualify for funding for the acquisition of permanent NOx offsets under this Section comply with the following criteria:

(i). Offsets must be generated by the installation of pollution control equipment or equivalent permanent pollution prevention projects that are directed at controlling NOx emissions;

(ii). Offsets must be permanently retired and no annual credits of NOx can be used as the basis of the offsets;

(iii). Offsets must be incorporated into state or local permits or other appropriate federally enforceable, permanent restrictions;

(iv). Generators must not be otherwise legally required to control the NOx emissions that are to be used for offsets; and

(v). The qualifying offsets may only be used once by an offset generator and solely for the purpose of this SEP. Offset generators cannot use any emissions reductions achieved as a result of implementing this SEP for any other emission trading or credit scheme.

6. Upon presentation by the selected non-profit agency to G-P of appropriate documentation that a specific source of NOx offsets has been identified and concurrence by the United States and G-P that the offsets will conform to the criteria set forth in this Section, G-P will promptly authorize the release of the necessary funds to the selected non-profit agency from the escrow account for the selected non-profit agency to pay to the generator of the offsets for the purpose of acquiring the offsets.

C. To the extent that NOx offsets are not obtained pursuant to this Section either by G-P or by another entity acting on G-P's behalf, within four years from the date of entry of this Consent Decree or in the event that G-P is unable to obtain the selected non-profit agency's or another entity's agreement to the conditions for transfer of funds specified in this Section, respectively, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

IV. Development of Lumber Kiln Emissions Data Project.--

A. G-P agrees either to conduct a comprehensive air emissions assessment of lumber kilns or to have a designated entity perform the assessment on G-P's behalf with G-P's funding, as specified in Paragraph IV.C. below. The purpose of this SEP is to identify and quantify the air emissions that result from the lumber kiln drying process. These kiln emissions have not been previously quantified because insufficient test protocols and test methods are all that is currently available for their evaluation. This SEP will assist with the development of a test protocol for lumber kilns and result in the collection of data useful in establishing State Implementation Plan ("SIP") requirements and/or major source determinations.

B. G-P agrees that within 60 days of entry of this Consent Decree it will propose to EPA a designated entity to perform this Lumber Kiln Emissions Data project on G-P's behalf which meets the requirement of this Section, and shall provide EPA with a plan for the assessment. EPA shall then have 30 days to approve or disapprove G-P's designation and assessment plan.

C. Within 30 calendar days of receipt of EPA approval of the designation of the entity and plan to conduct a lumber kiln emissions data project, G-P shall transfer $500,000 to the designated entity to conduct the assessment on G-P's behalf, as the basis for establishing test protocols for air pollutant emissions from lumber kilns.

D. G-P agrees to cooperate with the designated entity to undertake this study, including the use of some of G-P's lumber kilns, as necessary, to develop data in this study.

E. G-P agrees to condition the transfer of these funds to the designated entity upon the entity's agreement that it will perform the work on G-P's behalf and that the following criteria will be met:

1. the entity agrees that the purpose of the study is to enable the establishment of lumber kiln air emissions generally;

2. the entity agrees to use best efforts to complete the study and submit a final written report to G-P within a time specified by EPA;

3. the entity agrees that it will make the final report available to state and local agencies and the public-at-large; and

4. the entity agrees to submit to G-P within 30

calendar days of delivery of the final report, appropriate verification that the funds designated for this SEP were spent in accordance with the conditions set forth in this Section.

F. To the extent that all tasks under this SEP are not completed within three years from the date of entry of this Consent Decree, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P facilities are located.

1. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency (hereinafter any non-profit agency with which G-P enters into a contract pursuant to Parts III and IV shall be referred to as a "selected non-profit agency") to implement the environmental project identified in this Part III on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall deposit $2,750,000 in an interest bearing escrow account established specifically for the purpose of obtaining permanent NOx emissions offsets as specified below in this Part III. None of these funds may be used to pay for administrative or other overhead expenses by G-P, the selected non-profit agency, or other entities participating in this project.

2. G-P will participate, as necessary, with the selected non-profit agency, or other interested government agencies and other interested parties in attempts to locate acceptable sources of NOx offsets. To the extent practicable, SAMI emissions data, including the data produced under Sections II and III above, will be used in locating and selecting offset generators. Additional sources of emissions data can be obtained from the National Parks Service and the U.S. Forest Service.

3. G-P will work with SAMI to use best efforts to locate more than one, but not more than five, qualifying projects with as many tons of NOx offsets as is practicable. To the greatest extent practicable, in the selection process, G-P shall require in its contract with the selected non-profit agency that priority be given to potential offset generators that meet the criteria set forth in this Section. G-P shall also require in its contract with the selected non-profit agency that preference be given to NOx generators that make additional contributions to the cost of the emissions reduction project, such as agreeing to pay a percentage of the initial purchase price of air pollution control technology or a percentage of the operation and maintenance costs of the equipment. G-P shall also require that in its contract with the selected non-profit agency that best efforts be used to ensure that offsets acquired are purchased at the lowest reasonable price.

4. G-P will arrange with the selected non-profit agency to use best efforts to obtain offsets as near as possible (within 100 kilometers) to the following Clean Air Act Class I attainment areas: Shenandoah, Great Smoky Mountains, James River Face, Linville Gorge, Shining Rock, Joyce Kilmer/Slickrock,

Cohutta, or Sipsey. The United States agrees that offsets shall not be obtained for the purpose of this SEP from G-P's competitors nor have an adverse effect on G-P's competitive position.

5. G-P shall require in its contract with the selected non-profit agency that any NOx generator seeking to qualify for funding for the acquisition of permanent NOx offsets under this Section comply with the following criteria:

(i). Offsets must be generated by the installation of pollution control equipment or equivalent permanent pollution prevention projects that are directed at controlling NOx emissions;

(ii). Offsets must be permanently retired and no annual credits of NOx can be used as the basis of the offsets;

(iii). Offsets must be incorporated into state or local permits or other appropriate federally enforceable, permanent restrictions;

(iv). Generators must not be otherwise legally required to control the NOx emissions that are to be used for offsets; and

(v). The qualifying offsets may only be used once by an offset generator and solely for the purpose of this SEP. Offset generators cannot use any emissions reductions achieved as a result of implementing this SEP for any other emission trading or credit scheme.

6. Upon presentation by the selected non-profit agency to G-P of appropriate documentation that a specific source of NOx offsets has been identified and concurrence by the United States and G-P that the offsets will conform to the criteria set forth in this Section, G-P will promptly authorize the release of the necessary funds to the selected non-profit agency from the escrow account for the selected non-profit agency to pay to the generator of the offsets for the purpose of acquiring the offsets.

C. To the extent that NOx offsets are not obtained pursuant to this Section either by G-P or by another entity acting on G-P's behalf, within four years from the date of entry of this Consent Decree or in the event that G-P is unable to obtain the selected non-profit agency's or another entity's agreement to the conditions for transfer of funds specified in this Section, respectively, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

IV. Development of Lumber Kiln Emissions Data Project.--

A. G-P agrees either to conduct a comprehensive air emissions assessment of lumber kilns or to have a designated entity perform the assessment on G-P's behalf with G-P's funding, as specified in Paragraph IV.C. below. The purpose of this SEP is to identify and quantify the air emissions that result from the lumber kiln drying process. These kiln emissions have not been previously quantified because insufficient test protocols and test methods are all that is currently available for their evaluation. This SEP will assist with the development of a test protocol for lumber kilns and result in the collection of data useful in establishing State Implementation Plan ("SIP") requirements and/or major source determinations.

B. G-P agrees that within 60 days of entry of this Consent Decree it will propose to EPA a designated entity to perform this Lumber Kiln Emissions Data project on G-P's behalf which meets the requirement of this Section, and shall provide EPA with a plan for the assessment. EPA shall then have 30 days to approve or disapprove G-P's designation and assessment plan.

C. Within 30 calendar days of receipt of EPA approval of the designation of the entity and plan to conduct a lumber kiln emissions data project, G-P shall transfer $500,000 to the designated entity to conduct the assessment on G-P's behalf, as the basis for establishing test protocols for air pollutant emissions from lumber kilns.

D. G-P agrees to cooperate with the designated entity to undertake this study, including the use of some of G-P's lumber kilns, as necessary, to develop data in this study.

E. G-P agrees to condition the transfer of these funds to the designated entity upon the entity's agreement that it will perform the work on G-P's behalf and that the following criteria will be met:

1. the entity agrees that the purpose of the study is to enable the establishment of lumber kiln air emissions generally;

2. the entity agrees to use best efforts to complete the study and submit a final written report to G-P within a time specified by EPA;

3. the entity agrees that it will make the final report available to state and local agencies and the public-at-large; and

4. the entity agrees to submit to G-P within 30

calendar days of delivery of the final report, appropriate verification that the funds designated for this SEP were spent in accordance with the conditions set forth in this Section.

F. To the extent that all tasks under this SEP are not completed within three years from the date of entry of this Consent Decree, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

Georgia-Pacific Corporation

Environmental Engineering
800 Zeagler Drive, Suite 420
Palatka, Florida 32177-3867
Telephone (904) 329-9104
Fax (904) 329-9646

September 26, 1996

Mr. Clare H. Fancy, P.E.
Chief
Bureau of Air Regulation
2600 Blairstone Rd
Tallahassee, FL 32399-2400

RE: Putnam County
Georgia-Pacific Corporation
Plywood Plant

Dear Mr. Fancy:

Georgia-Pacific Corporation (G-P) met with you and your staff on September 6, 1996 to discuss permitting of the proposed RTO and dryer at the Hawthorne plant. We also addressed potential retroactive PSD permitting issues related to construction of the plant and modifications made to the presses in 1985 and 1987. Per your request on September 13, 1996, the following provides a discussion of the permitting history of the presses and the related regulatory history that establishes why retroactive PSD permitting does not apply to the presses at the G-P Hawthorne facility.

In the 1980's the presses were classified as fugitive by EPA and therefore not regulated under the PSD program. Attachment 'A' (Georgia-Pacific Corporation's Response To Clean Air Act Notice of Violation No. 9401-HQ-CAA-113, November 23, 1994, p. 51-57) provides a detailed discussion of this and references the sources where EPA termed press emissions as fugitive in 1974, 1980, 1981, 1982, and 1983.

However, if the presses were considered point sources, the 1985 and 1987 press modifications would not have triggered PSD review using today's emission factors. The 1985 and 1987 modification would have only increased emissions by 16 tpy and 4 tpy respectively, which combined still does not trigger the 40 tpy VOC significance threshold. A discussion of the derivation of the emission factors and calculations are provided in Attachment 'B'. Id at p.182-189 & p.203-206. Note the calculations are based on operating the presses 8136 hours, which currently can not be done due to limited drying capacity.

Finally, in the 1980's, EPA issued several forms of guidance on the "debottlenecking" subject. EPA affirmed that emissions increases from the "modified unit only" should be considered in calculating the net emissions increase. In 1989, the courts confirmed EPA's approach to PSD applicability determination, in

Mr. Clare H. Fancy, P.E.
Chief
Bureau of Air Regulation
RE: Georgia-Pacific Hawthorne Plywood Plant
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Puerto Rico Cement Co v. EPA, that the emissions from the modified unit only should be considered in calculating the plants's potential emission increases. A detailed discussion and references are in Attachment 'C'. Id at p.44-50.

In 1992, the G-P Hawthorne plywood plant proposed to add platens to presses. G-P was in the middle of the CAA Section 114 review with EPA and wanted to make sure that all modifications at the plant were thoroughly reviewed and permitted as necessary by the State. Gordon Alphonso, Lawrence Otwell and Tom Stevens of G-P met with Howard Rhodes, Jim Pennington, and John Brown in Tallahasssee to discuss permitting the press platen modification to ensure all permitting concerns were addressed. We were given direction by the State to permit the existing presses as an "after the fact" permit and permit the proposed platens through the normal construction application process. That permit process was completed in 1994 and the addition of the platens were completed in October 1995. This modification increased VOC's by 9.4 ton per year and therefore does not exceed the PSD for VOC's threshold of 40 tpy increase in emissions.

Upon review of the issues above, G-P hereby requests a letter of acknowledgement from you that confirms our position that after-the-fact permitting of the press modifications made in 1985 and 1987 were already addressed in the 1994 permit and that there are no additional permitting actions required for the presses at the Hawthorne Plywood plant to date.

We thank you for your efforts in this matter.

Sincerely,

Margaret M. Vest

Margaret M. Vest, P.E.
Field Environmental Engineer

cc: Vernon Adams
Tobin Finley
Robert J. Leetch, P.E.
Lawrence Otwell
Wayne Richardson

after the fact construction permit process.

It does not say here that we told them that PSD does or does not apply.

JB

I don't, in all honesty, remember this meeting. However, I'll take their word for it. If any source presented a change that involved 9.4 TPY increase in VOC's and ~~had~~ not I'd have given them the same response. I'm not sure that any discussion of PSD applicability was made... (i.e. their permit engineer needed to make that call as part of normal

Mr. Clare H. Fancy, P.E.
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Bureau of Air Regulation
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Attachment 'A'

Georgia-Pacific Corporation's Response To Clean Air Act Notice of Violation No. 9401-HQ-CAA-113, November 23, 1994, p. 51-57.

D. EPA Has Always Officially Classified Plywood Press Emissions As Fugitives.

Under the PSD program, only "major stationary sources" are subject to PSD requirements. A plant is considered to be a major stationary source only if it (1) falls within one of the categories of sources listed in the regulations and emits (or has the potential to emit) more than 100 tons per year of any pollutant regulated under the Act or (2) is any other type of stationary source and emits (or has the potential to emit) more than 250 tons per year of any such pollutant. 42 U.S.C. § 7479(1). Because none of G-P's facilities falls within the "listed categories," they are subject to the 250 ton per year threshold. For sources subject to this higher threshold, fugitive emissions are not counted in determining whether the source reaches the threshold and is therefore considered a "major stationary source." 40 C.F.R. § 52.21(b)(20). In addition, for such sources, fugitive emissions are not counted in determining whether a plant change would increase emissions above the significance threshold and therefore trigger PSD review. Id. at § 52.21(i)(4)(vii).

EPA generally divides emissions from stationary sources into two categories: "point emissions (e.g., from a stack or chimney) and fugitive emissions." 45 Fed. Reg. 52676, 52690 (Aug. 7, 1980). Under the PSD regulations, "fugitive emissions" are defined as "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening." 40 C.F.R. § 52.21(b)(20). Precisely the same definition of fugitive emissions is used in several other CAA programs, including the new source review ("NSR") program, the Title V operating permits program, and the visibility program.[26] Not surprisingly, the Agency also has proposed to use the same definition in its new program for regulating hazardous air pollutants ("HAPs") under Title III of the Act. 58 Fed. Reg. 42760, 42785 (Aug. 11, 1993). Thus, the definition of "fugitive" emissions is well-established under the CAA.

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[26] See 40 C.F.R. § 52.24(f)(9) (NSR Program); 57 Fed. Reg. 32,250, 32,296 (July 21, 1992) (to be codified at 40 C.F.R. 70.2)(title V program); 40 C.F.R. § 51.301 (visibility program).

← emissions that could not reasonably pass through a chimney stack, etc.

[These emissions could be vented to a stack?],

If so, they may not be fugitives;

Their ~~measurements~~ are [illegible] however,

EPA and the states have provided interpretations on two aspects of the definition of fugitives that are particularly pertinent to the case at hand. First, EPA and the states have confirmed that emissions which are not collected but simply escape into the ambient air through a building ventilation system qualify as fugitive emissions. In a July 1992 guidance document issued by EPA to the states, the Agency recommended that states should define "fugitive emissions" in their SIPs as "[r]eleases to the air that are not emitted through stacks, vents, ducts, pipes, or any other confined air stream, including fugitive equipment leaks, evaporative losses from surface impoundments, and releases from building ventilation systems." EPA, Guidance on the Implementation of an Emission Statement Program at pp. xiv and 41 (Draft, July 1992) (emphasis added) (Attachment 40). Thus, it is clear that a "building ventilation system" is not considered to be "functionally equivalent" to a stack, chimney, or vent.

Second, in determining whether emissions should be considered fugitives or point emissions, the Agency has made it clear that it considers whether the emissions would ordinarily be collected and discharged through stacks or functionally equivalent openings. Indeed, that was the precise interpretation EPA adopted in promulgating the definition of "fugitive" emissions in the 1980 PSD rules. In the proposed rule creating the PSD program, the Agency proposed to define "fugitive emissions" as "those emissions that do not pass through a stack, vent, or other functionally equivalent opening." In the final rule, EPA changed the definition to "those emissions that could not reasonably pass through" such an opening. 45 Fed. Reg. 52693, 52692 (Aug. 7, 1980). The Agency explained that the reason for this change was to

> ensure that sources will not discharge as fugitive emissions those emissions which would ordinarily be collected and discharged through stacks or other functionally equivalent openings.

Id. at 52693 (emphasis added). Thus, the concept of reasonableness was added to the final definition to ensure that a source would not be able to avoid PSD review by releasing as fugitives those

emissions that typically would be collected and ducted through a stack. As a result, in determining whether emissions should be classified as fugitives, the Agency has looked at whether such emissions are "ordinarily" captured by a collection system.

On several occasions, EPA has confirmed that it interprets the PSD definition of "fugitives" to turn, in part, on whether emissions are ordinarily collected and discharged through stacks or functionally equivalent openings. In May 1987, for example, EPA Region IX received an inquiry about whether emissions from a landfill would be considered fugitive emissions for purposes of NSR. The Regional Air Division Director passed the inquiry along to the Director of EPA's Office of Air Quality Planning and Standards ("OAQPS"). In his memorandum to the OAQPS Director, the Regional Air Director noted that the definition of fugitive emissions refers to emissions that "could not reasonably pass through" a stack or other similar opening. He then asked:

> If emissions from a landfill could feasibly be collected and passed through a gas recovery system, what criteria would be needed to then call it a reasonable option? Is it possible that such a landfill could be required to collect these emissions?

Memorandum from David P. Howekamp, Air Division Director, EPA Region IX, to Gerald Emison, Director, EPA Office of Air Quality Planning and Standards (September 1, 1987) (Attachment 41).

In his response, the Director of OAQPS noted that some landfills are constructed with gas collection systems. In these cases, he said, the emissions would clearly not qualify as fugitives. He then went on to say:

> The preamble to the 1980 NSR regulations characterizes nonfugitive emissions as ". . . those emissions which would ordinarily be collected and discharged through stacks or other functionally equivalent openings." Although there are some exceptions, it is our understanding that landfills are not ordinarily constructed with gas collection systems. Therefore, emissions from existing or proposed landfills without collection systems are to be considered fugitive emissions . . . .

I think most landfills are now ~~retrofit~~ ordinarily constructed with gas collection systems ...

Memorandum from Gerald Emison to David P. Howekamp (Oct. 6, 1987) (emphasis added) (Attachment 42). As noted above, plywood press emission are not ordinarily collected and discharged through stacks or other functionally equivalent openings. Indeed, G-P is not aware that any softwood plywood plant in the country collects or captures emissions from plywood presses.

Finally, in an October 1994 guidance document signed by the Director of OAQPS, EPA reevaluated whether emissions from landfills should be considered fugitives. See Memorandum from John S. Seitz re: Classification of Emissions from Landfills for NSR Applicability Purposes (Oct. 21, 1994) (Attachment 43). This document reviewed the Agency's previous determination regarding such emissions, noted that technologies have evolved since 1987, and acknowledged that the use of gas collection systems "has become much more common." Id. Because new landfills are "ordinarily" constructed with such systems, the document created a rebuttable presumption that landfill emissions should no longer be considered fugitives.

Although this document changed the presumption regarding the status of landfill emissions, its analysis reaffirms the reasoning of why emissions from plywood presses are fugitive emissions for purposes of PSD applicability. As noted above, G-P is not aware that any softwood plywood plant in the country was constructed during the NOV time period with a system to collect press emissions. The recent EPA guidance specifically reaffirmed the importance of considering whether there is "collection technology in use by other sources in the same source category" to determine whether emissions from a new source or a modification should be considered fugitives emissions. Id.

This new guidance also observed that the ultimate decision of whether emissions from a particular source qualify as fugitives "is a factual determination to be made by the permitting authority, on a case-by-case basis." Id. The guidance suggested, however, that if no other similar sources use a collection system, emissions from a new or modified source should be considered to be

fugitive emissions unless the permitting authority specifically determines that "a system can reasonably be designed to collect" emissions from a proposed new source. Id. at 3.

No permitting authority has yet determined that it is reasonable to require a collection system for plywood press emissions. Even if such a finding were now made, however, it could not retroactively change the fact that press emissions from modifications made in the past were exempted from PSD review as fugitive emissions. EPA's recent guidance document specifically stated, for example, that "the NSR status of any existing landfill [will not be changed] based on the issues discussed in this memorandum." Thus, EPA has acknowledged that it cannot retroactively reclassify press emissions as non-fugitives and use that reclassification as the basis for an enforcement action.

Plywood presses are pieces of equipment located inside large warehouse-like buildings. Emissions from plywood presses historically were not collected by any control system, but escape from all sides of the press into unconfined areas around the equipment and, to the extent the emissions reach the ambient air, exit through the building's general ventilation system. These physical characteristics indicate that plywood press emissions fall squarely within the definition of "fugitives" under the PSD program. It is therefore no surprise that EPA has gone on record repeatedly as characterizing plywood press emissions as fugitives.

1974 and 1980 AP-42s

As early as 1974, EPA characterized plywood press emissions as both minor and "fugitive." Indeed, EPA, in establishing emission factors for plywood veneer dryers, observed: "A third source [of emissions in the plywood industry] is the pressing operation although these emissions are minor." Attachment 9. In reissuing plywood veneer dryer emission factors in 1980 and 1985, EPA again noted that: "The main source of emissions is the veneer dryer, with other sources producing negligible amounts of organic compound emissions or fugitive emissions." Attachments 14 and 22 (emphasis added). The Agency further stated: "The amounts of organic compounds released

because of adhesive used during the plywood pressing operation are negligible." Id. (emphasis added).

1981 Draft BID

Three documents prepared by EPA over the time period from 1981 to 1983 provide further proof that it was the Agency's view that plywood press emissions are "fugitives." In 1980, EPA began to develop an NSPS for softwood plywood plants. In a letter sent to various members of industry in 1981, the Agency explained that, "[a]s part of this process [of developing an NSPS], EPA prepares a background information document ("BID"), which contains a description of the industry to be covered, and presents other information that is used as the basis for setting the standard." Letter from Jack R. Farmer (Chief, Chemical and Petroleum Branch, Emission Standards and Engineering Division) (Aug. 10, 1981) (Attachment 44). This BID contains EPA's own description of the operations in the plywood industry and the emissions from those operations.

In a draft of the BID that EPA publicly released in 1981, the Agency noted that "some gaseous organics are emitted" during the pressing process. EPA then stated that "[t]hese fugitive emissions have only been considered in terms of their effects within the plant. Their presence requires adequate venting to protect workers' health and eliminate odors." New Source Performance Standards for the Plywood Manufacturing Industry, Draft Background Information Document, pp. 3-11 to 3-12 (Aug. 4, 1981) (Attachment 45). Thus, as early as 1981, EPA explicitly characterized press emissions as fugitives.

1982 Draft CTD

By early 1982, the Agency had abandoned its efforts to develop an NSPS for dryers. Later that year, however, EPA released a preliminary draft of a Control Technology Document (CTD) designed to identify alternative control techniques for reducing emissions from plywood veneer dryers. This document uses language virtually identical to the 1981 BID to describe emissions from

presses, again referring to them explicitly as "fugitive emissions." Control Techniques for Organic Emissions from Plywood Veneer Dryers, Preliminary Draft, p. 2-21 (Oct. 1982) (Attachment 46).

1983 Final CTD

Finally, in May 1983, EPA issued the final CTD for the plywood manufacturing industry. The Agency noted that this comprehensive 110-page document was written to detail "the sources and types of emissions from the plywood industry, the types and costs of emissions control techniques, environmental impacts associated with these control techniques, and available emissions data." Control Techniques for Organic Emissions from Plywood Veneer Dryers, Final Draft (EPA) at 1-2 (May 1983) (Attachment 21). Although this document focused on veneer dryers, it also contained a detailed description of other parts of the plywood manufacturing process. In the section of the document that discusses the press operations, EPA made the following statement:

> During pressing and when the presses are released, some gaseous organics may be emitted from unreacted monomers. These fugitive emissions have been considered only in terms of their in-plant effects. Their presence requires adequate venting to protect worker health and to eliminate odors.

Id. at 2-20 (emphasis added).

Thus, from 1974 on, the Agency consistently characterized plywood press emissions as "fugitive emissions." Indeed, there is not record of a final EPA document that takes a contrary position.

Mr. Clare H. Fancy, P.E.
Chief
Bureau of Air Regulation
RE: Georgia-Pacific Hawthorne Plywood Plant
Press Permitting Issues

Attachment 'B'

Georgia-Pacific Corporation's Response To Clean Air Act Notice of Violation No. 9401-HQ-CAA-113, November 23, 1994, p. 182-189 & 203-206.

For modifications completed after 1980

Emission Factor: 2.94 lb VOC/10 Msf plywood on a 3/8-inch basis[128]

Maximum Potential VOC Emissions Increase:

(33,775 Msf/yr)(2.94 lb/10 Msf)(1 ton/2000 lbs) = 5 TPY VOC.

Based on the calculations above, it is evident that, even under an assumption of "worst case" conditions, the VOC emission increases associated with the installation of dryer controls was well below the PSD significance thresholds in place at the times these changes were made -- 250 TPY (1978-80) and 40 TPY (1980-present).

B. General Issues Relating To Press Emissions: Plywood Press Emission Factors.[129]

Assuming arguendo that press emissions were not fugitives,[130] none of the plywood press modifications cited in the NOV would have triggered PSD review. Recently obtained emissions data establish that the alleged press modifications or additions would not have exceeded either the 40 or 250 TPY PSD modification threshold for VOCs.[131] This data, which were not available to G-P when it submitted its Section 114 responses on the plywood plants in 1993, demonstrate that, when coupled with maximum potential production data, none of the press additions/modifications cited in the NOV would result in a VOC PTE greater than 40 TPY.

Available emissions data come from three sources. First, G-P recently conducted emission tests at three of the plywood plants cited in the NOV: Whiteville, NC, Hawthorne, FL, and

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[128] 1980 and 1985 AP-42s (these specified the same factor).

[129] G-P does not concede that the arguments which follow apply only to plywood presses.

[130] As noted above, press emissions should be treated as fugitive and included for the purposes of determining PSD applicability. See supra at 51-57, 86-89.

[131] In the analysis that follows, G-P uses recent VOC test methods and current definitions of VOC. Obviously it does this without in any way waiving any arguments G-P has regarding the data that are available, what test methods applied, and what definition of VOCs was applicable at the time the press modifications were made, nor does G-P waive any contentions that it may have regarding the legality of EPA/state current definitions of VOC or related test methods.

Emporia, VA. (A copy of the testing report for these plants is at Attachment 87.) In each case, G-P's contractor collected emissions data in three separate test runs from specially constructed temporary hoods over plywood presses. Each of the presses had between 32-40 press openings. The tests gathered data on and calculated "total hydrocarbons" (using U.S. EPA Method 25A)[132] and formaldehyde, aldehyde, and ketone (using EPA Method T-005).[133] Based on the hourly emission rate data, emission factors were calculated and expressed in lbs/Msf using measured production rates (converted to the nominal standard of 3/8-inch basis Southern pine plywood). Production data were collected contemporaneously with the test runs. The details of the supporting calculations are explained in the test report. See Attachment 87.

Second, at the direction of EPA's Office of Air Quality Planning and Standards, Emission Inventory Branch, Midwest Research Institute ("MRI") recently has proposed an AP-42 emission factor for VOC emissions from plywood press vents. See MRI Report at 38. The test data apparently used by MRI for the plywood press emission factor was from a Woodtech Inc. plant in Bluefield, Virginia. See MRI Report at pp. 21,38. The utility of these data for estimating typical

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[132] As explained above, EPA has never promulgated a rule making Method 25A applicable to the wood products industry. Moreover, because method 25A was not designed for gas streams with high moisture content and high proportions of organic condensibles/aerosols, a number of problems recur when the method is applied in the wood products industry. See supra at 42-43.

[133] No regulation explicitly defines "VOC" to include the hydrocarbons formaldehyde, aldehyde and ketone. However, in EPA's recently-issued draft AP-42 Emissions Factors for Plywood Plants, the Agency takes the position that "VOCs" must include separate measurements for each of these compounds due to the perceived "poor response" performance of Method 25A in detecting formaldehyde, aldehyde and ketone. See MRI, Emission Factor Documentation for AP-42, Sections 10.5.3, 10.5.5 Plywood Manufacturing, Final Report, EPA Contract No. 68-02-0159, Work Assignment No. 4601-10 at 17-19 (Mar. 30, 1994) ("MRI Report") (Attachment 30). G-P measured each of these compounds in its plywood press VOC testing. Of course, G-P does not thereby concede the validity of this approach to defining "VOCs." G-P also does not believe that it is appropriate to cumulatively add test results for the compounds together, without discounting to reflect the fact that Method 25A does capture some proportionate amounts of the "non-hydrocarbon compound." Moreover, EPA has recently proposed to delete acetone (a ketone component) from the definition of "VOC" at 40 C.F.R. § 51.100(e)(1). See 59 Fed. Reg. 49,899 (Sept. 30, 1994). Therefore, any VOC data used to assess plywood press emissions that includes acetone should be discounted to reflect the fact that acetone is not photochemically reactive.

softwood plywood press emissions is not clear, because it is G-P's understanding that the Bluefield plant produces hardwood plywood. Moreover, EPA gave the emission factor a low rating for reliability. See MRI Report at 42 (hydrocarbon data ranked "D," formaldehyde ranked "E").

Third, in November 1992, Weyerhaeuser tested emissions from its plywood presses at the Mountain Pine, Arkansas plant, which is identified in the Wood Products Industry 1994 Directory as a producer of softwood plywood. A copy of an excerpt of the test report that G-P has obtained is at Attachment 88. G-P did not obtain this report until the Spring of 1994.

The emission factors for VOC emissions from plywood presses, based on the above data, are:

PLANT	VOC EMISSION FACTOR
Whiteville (G-P)	0.0085 lbs/Msf
Draft AP-42	0.0243 lbs/Msf
Emporia (G-P)	0.132 lbs/Msf
Hawthorne (G-P)	0.256 lbs/Msf
Weyerhaeuser	0.440 lbs/Msf

There are several points to observe about the derivation of these factors. First, as pointed out above, the MRI AP-42 draft factor is apparently derived from hardwood plywood production, rather than the softwood lumber that G-P uses at the plywood facilities addressed in EPA's NOV. Second, while each of G-P's tests included measurements for hydrocarbon (per Method 25A) and formaldehyde, aldehyde and ketone (per Method T-005), MRI and Weyerhaeuser's data apparently include only 25A and formaldehyde testing. This limitation does not appear to be serious, because: (1) the three G-P sets of data all show consistently that formaldehyde, aldehyde and ketone are a small fraction (less than 10%) of "total VOCs," found when using Method 25A to measure total hydrocarbon components; (2) this ratio is essentially the same in the MRI report when comparing the

formaldehyde portion to total hydrocarbons; and (3) Weyerhaeuser added a "10% safety" factor to its Method 25A hydrocarbon results. In short, the data as a whole suggest that the proportion of formaldehyde, aldehyde and ketone in comparison to hydrocarbons (per Method 25A) is very low.

Third, the resulting emission factors vary somewhat. The differences among the factors may be due to different test conditions, including the size and configuration of the natural draft doghouse, air flow from the presses, the variabilities among plants and their equipment, seasonal variations in the raw materials, or the many inherent problems with Method 25A. In particular, the higher value reported for the Weyerhaeuser factor appears to be due to test design problems which produced substantial positive bias in the Method 25A results. As is explained in Attachment 89, G-P's test consultant reviewed the Weyerhaeuser test report materials made available to G-P and found two basic problems, particularly in the use of the glass wool filter. Weyerhaeuser's tests were conducted using two variations of Method 25A. The first (wet) method used a heated probe to control the high moisture content of the exhaust. The second (dry) method used a condenser to remove the moisture. When Weyerhaeuser performed a "wet" Method 25A test, it used a glass wool plug rather than the filter recommended for 25A to prevent condensible organic materials from reaching the sample collection point. This means that the 0.440 Weyerhaeuser emission factor is biased high. Second, when Weyerhaeuser ran "dry" Method 25A tests, the Weyerhaeuser report does not show whether the appropriate filter was used. Thus, it is unclear whether the dry test 25A data is acceptable. As such, the consultant advised against including the data in the data base. Attachment 89 at 3-3.

Based on its review of this data, G-P submits that the Hawthorne factor of 0.256 lbs/Msf is a very conservative emission factor. It is the highest emission factor from the three source runs conducted by at the three G-P plywood plants; it is an order of magnitude higher than EPA's own contractor recommends. Indeed, if G-P were forced to litigate with the Government over these issues, the Company would argue forcefully for the validity of its test results.

The technical process G-P used to develop pollutant-specific emission factors from its own source testing is as follows:

1) Production records documenting plywood press through-put during the test period were maintained, and production rates were converted to thousand square feet per hour (Msf/hr) on a 3/8-inch basis.

2) Measured emission rates in pound per hour (lb/hr) were then divided by the corresponding production rate to establish an emission factor relating emissions to production throughput (lbs/Msf-3/8-inch basis).

3) The resultant factor was then used to calculate emissions based on an annual maximum potential production basis.

Due to the degree of interest in assuring that press estimates were based on maximum production and emission scenarios expressed by both EPA and DOJ at the October 13-14 meeting, but without vacating any potential defenses, G-P has reviewed both the emission factors available and the maximum press production scenarios for each plant. The most conservative of the G-P plywood press emissions data (Hawthorne) has been selected for use in the following plant-specific press emission analyses. Additionally, information was obtained from the plants to determine the combination of press cycle time and board thickness which produced the optimum (highest) production potential in terms of Msf/hr on a 3/8-inch basis. Each facility also provided information that allowed us to determine the maximum available annual press operating hours after deducting minimum mandatory maintenance downtime. (In no case did this deduction of mandatory downtime materially affect the outcome of the calculations of maximum potential emissions relative to PSD thresholds.) Using these parameters to define maximum potential plant operating capacity, a detailed PTE calculation was completed for all press modifications cited in the NOV. These calculations are included in the plant-specific discussions. In no case does the data support an allegation that any cited press modification resulted in an increase in VOC emission potential above a 40 TPY threshold.

In light of these emissions data, G-P strongly disputes the basis for the allegations in EPA's NOV concerning plywood press emissions. We urge EPA to review the data and reconsider its findings. At a minimum, if EPA's allegations are based on emission factors or other data of which G-P is not aware, EPA should provide that information to G-P to facilitate negotiations concerning the NOV.

C. General Issues Relating To Plywood Plant-By-Plant Analysis: Identification Of Dryer And Press Maximum Potential Production Capacities.

In order to develop veneer dryer and plywood press emissions estimates for the plant-by-plant analysis that follows it was necessary to determine maximum potential production capacities of the presses and dryers cited in the NOV.

It is important to recognize that, for the purposes of the NOV response, G-P has used different criteria in some scenarios to calculate maximum potential production capacities than were used for earlier G-P Section 114 Responses. The production capacities included in the responses to the 114 inquiry submitted by G-P to EPA through December 1993 were estimated in the context of the language of the 114 inquiry, which stated:

> Quantify (by emission point source as listed in Section I.T. as well as total potential and actual emission levels for each of the following air pollutants: Volatile Organic Compounds, Oxides of Nitrogen (NOX), Carbon Monoxide (CO) and Particulate PM & PM_{10})

EPA Section 114 Request to G-P, II.C. On this basis, G-P understood the 114 request to apply to an overall plant capacity. G-P estimated plant-wide emissions using actual 1992 production data to define the actual capacities. Maximum potential capacities were based on plant-wide production capacity as limited by the existing physical limitations at the plant.

Emission estimates completed in response to the NOV, however, address specifically identified equipment installations, replacements, and/or modifications. In this latter context, G-P reviewed the actual maximum potential capacities of individual pieces of production equipment. Given the historical context, whenever contemporaneous documentation was found which identified

the anticipated production increases which were to be realized from a specific modification, the stated production increase was used as the basis for calculating the concurrent potential to emit. Due to the fact that many of these modifications occurred long ago, historical documentation could not be found in many instances or the documentation found provided insufficient information to determine historical maximum potential operating capacities of individual pieces of equipment. In those instances, G-P contacted plant personnel to determine the current maximum potential production capacities of equipment as if equipment losses able to operate on an unrestricted basis. These evaluations were completed under the very conservative assumption that capacities of other plant equipment, the availability of raw material resources, product demand, permit limitations on other equipment, holidays and annual scheduled plant closings did not prevent the equipment in question from operating at its individual maximum potential capacities.

1. **Dryer Production Capacities.**

Current maximum potential dryer capacities were provided by plant personnel on a unit-by-unit basis. Emission estimates have been completed by using the applicable unit capacity or the applicable combined drying capacity of the plant dryers. These maximum potential dryer capacities were based on plant records which document dryer production on an hourly basis. Plant personnel took the highest record hourly production of each dryer and multiplied it by 8760 hours per year to develop the maximum annual production capacity of each dryer.

2. **Press Production Capacities.**

Press production capacities were provided by plant personnel, according to the following criteria:

- Hourly maximum square footage of press throughput per opening, converted to 3/8" basis;
- Type of product used to produce this hourly maximum throughput;
- Number of press cycles per hour necessary to accomplish this rate;

- Mandatory down time for maintenance of each press;
- Maximum production ever achieved over an 8-hour shift in the history of a plant, converted to 3/8-inch basis.

Using these criteria, each plywood plant was able to identify the product that it can produce at the highest hourly plywood output on a per opening basis. Using the resultant production rate, and assuming an unrealistic operational schedule of 8760 hours per year (minus the mandatory downtime), G-P was able to estimate the maximum annual production capacity for each press opening. With one exception, the maximum potential production capacity exceeded the record high hourly production at each plant. The only exception was at the Dudley facility where the record high production actually achieved the estimated maximum potential production capacity. In the case of both a press expansion and new press installation, increased production capacity was then estimated by multiplying the per opening production rate by the number of new openings installed.

D. Plywood Plant-by-Plant Analysis.

1. Alabama Plywood Plants.

EPA alleged in the NOV that G-P violated PSD permitting requirements for certain modifications at its Peterman and Talledega, Alabama plywood plants. Where EPA has approved a state's own PSD program, EPA must defer to the state's interpretation of that program. Supra at Section V.A. Since 1981, the State's own PSD regulations have been the basis for the approved program. See 46 Fed. Reg. 55517 (Nov. 10, 1981). Notably, the Alabama Department of Environmental Management ("ADEM") has advised G-P that there are no PSD concerns with regard to the plant changes cited in EPA's NOV. Letter from R. Grusnick (ADEM) to A.F. Hodges (G-P)(Sept. 22, 1994)(Attachment 52). Thus, Alabama's interpretation of its federally-approved PSD program should govern and violations alleged in the NOV disregarded.

Furthermore, the relevant wood processing organics associated with G-P's Alabama plants did not fall within the meaning of "VOC" as defined in the Alabama SIP. This definition

In 1987, six openings were added to presses No. 1, 2 and 3 and a new 30-opening press (No. 4) was installed, for a total increase of 48 openings. Each of the openings was nominally 4 feet by 8 feet with a total area of 32 sf. According to plant personnel, the Fordyce presses can operate at their maximum potential capacity when producing ½-inch, 3-ply plywood. When converted to a 3/8-inch basis, the maximum potential production capacity of the presses is estimated to be 570 sf/hr/opening. (This is greater than the plant's demonstrated record production of 469 sf/hr/opening. See Attachment 90 (Fordyce)).

Emissions from press vents are exempt under the PSD program. See supra at 51-57, 86-89; 47 Fed. Reg. 2112 (Jan. 14, 1982)(approving State incorporation by reference of § 52.21). Even if the press emissions were to be considered for PSD purposes, a PSD permit was required only where an increase of VOC emissions exceeded 40 TPY. Based on the most recent VOC emissions data available, as set out below, the 1987 press modifications resulted in a VOC emissions increase of considerably less than 40 TPY. Accordingly, the modifications were inconsequential for PSD purposes.

Maximum Potential Increase In Production (based on 8344 hours/year operation):

(48 openings)(570 sf/hr/opening)(8344 hrs/yr) = 228,291,840 sf/yr
= 228,292 Msf/yr

Maximum Potential VOC Emissions Increase:

Emission Factor: 0.256 lb/Msf on a 3/8-inch basis

Maximum Potential VOC Emissions Increase:

(228,292 Msf/yr)(0.256 lb/Msf)(1 ton/2000 lbs) = 29.2 TPY VOCs.

Consequently, no PSD permit was required for these changes at the Fordyce facility.

3. Hawthorne, FL.

Construction began at the Hawthorne, Florida plywood facility in June 1979. In the NOV EPA alleges that G-P failed to obtain a PSD permit for VOC emissions associated with the

following changes at the facility: (1) the original plant construction; (2) 1985 press installation; (3) 1987 press expansion; and (4) 1988 installation of a single-head sander. All of these allegations are time-barred under the applicable 5-year statute of limitations. See supra at Section VI. Further, neither the original plant construction nor the later modifications were performed in violation of PSD requirements. as discussed in more detail below. ← Good argument?

a. EPA Cannot Challenge Now The Original Approval Of The Plant's Construction Because G-P Relied Upon AP-42 To Reasonably Estimate Potential VOC Emissions Below The PSD Threshold.

Contemporaneous documents indicate that the State of Florida and EPA Region IV, after considerable pre-construction review, concluded that the facility's construction did not require a PSD permit, because the facility would not emit VOC in excess of the significance threshold, citing the then-applicable AP-42 emission factors. See, e.g., Letter from T. Devine (EPA Region IV) to G. Tice (G-P)(Feb. 14, 1980); Letter from T. Gibbs (EPA Region IV) to G. Tice (G-P)(July 14, 1980).[144] EPA cannot 14 years later seek to challenge that determination. See supra at Sections V.A. and B.

b. The 1985 Press Installation And 1987 Press Expansion Were Not Subject To PSD Requirements.

In 1985, a new 24-opening press was installed. Each of the openings was 4 feet by 8 feet in size. In 1986, press No. 3 was expanded by adding 6 new openings, increasing the total openings from 24 to 30. These press modifications were not linked. According to plant personnel, the Hawthorne presses can operate at their maximum potential capacity when producing ½-inch, 3-ply plywood. When converted to 3/8-inch basis, the maximum potential production capacity of the press is estimated to be 640 sf/hr/opening. (This is significantly greater than the plant's demonstrated record production of 577 sf/hr/opening. See Attachment 90 (Hawthorne)). These changes did not

[144] The documents addressing permitting requirements for the 1979 construction of Hawthorne have previously been provided to EPA in G-P's Section 114 Response for this facility, Attachment II.F. (Dec. 20, 1993).

implicate PSD requirements, because emissions associated with these changes were fugitive and were, therefore, not to be considered in determining PSD applicability. See supra at 51-57, 86-89; FAC §§ 17-2.100(94), 17-2.500(2)(b); 48 Fed. Reg. 52713 (Nov. 23, 1983)(conditionally approving State PSD regulations, including definitions). Even if subject to PSD, any increase in VOC emissions from even the 1985 and 1987 projects combined did not exceed the applicable 40 TPY VOC significance threshold.

i. **1985 Press Installation.**

Maximum Potential Increase In Production (based on 8136 hrs/yr operation)[145]:

(24 openings)(640 sf/hr/opening)(8136 hrs/yr) = 124,968,960 sf/yr
= 124,969 Msf/yr

Maximum Potential VOC Emissions Increase:

Emission Factor: 0.256 lb/Msf on a 3/8-inch basis

Maximum Potential VOC Emissions Increase:

(124,969 Msf/yr)(0.256 lb/Msf)(1 ton/2000 lbs) = 16 TPY VOCs.

ii. **1987 Press Expansion.**

Maximum Potential Increase on Production (based on 8136 hrs.yr operation):

(6 openings)(640 sf/hr/opening)(8136 hrs/yr) = 31,242,240 sf/yr
= 31,242 Msf/yr

Maximum Potential VOC Emissions Increase:

Emission Factor: 0.256 lb/Msf on a 3/8-inch basis

Maximum Potential VOC Emissions Increase:

(31,242 Msf/yr)(0.256 lbs/Msf)(1ton/2000 lbs) - 4 TPY.

Consequently, no PSD permit was required for either the 1985 press installation or the 1987 press expansion.

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[145] This estimate is based on a maximum potential production schedule of 8760 hours/year minus mandatory weekly down time of twelve (12) hours per week for press maintenance. See Attachment 90 (Hawthorne).

c. The 1988 Installation Of A Single-Head Sander Was Not Subject To PSD Requirements.

According to the Authorization for Expenditure form (Attachment 93) submitted and approved for this modification, the sole purpose of installing the single head sander was to reduce the amount of labor required for sanding "Tongue and Groove" panels. These panels were formerly sanded in a separate operation, but by installing a sander on the Tongue and Groove machine, the panels could be produced in a single, on-line operation. This modification eliminated two full-time positions, but did not increase production capacity. The Tongue and Groove panels are sanded at the end of the production process. Sanding operations are a specialty panel finishing process and do not impact the plant's overall production rate, production capacity or material usage. Consequently, as sanding operations do not produce VOCs, this change would not have increased VOC emissions.

4. Georgia Plywood Plants.

In 1976, EPA gave the State full authority to implement the federal PSD program. See 41 Fed. Reg. 24885 (June 21, 1976). In 1982, the Agency approved the State's PSD regulations. See 47 Fed. Reg. 6018 (Feb. 10, 1982). The State PSD regulations have remained in effect since that time. EPA has alleged in the NOV that G-P violated PSD permitting requirements for certain modifications at its Cedar Springs, Madison, Monticello and Warm Springs, Georgia plants. However, where EPA has approved a state's own PSD program, EPA must defer to the state's interpretation of that program. Georgia has recently stated: "Based on the way we were interpreting the PSD regulations at the time these changes were made, . . . we have determined that there were no violations of the PSD regulations at any of the [G-P Georgia] plants." Letter from R.H. Collom, Jr. (Chief, GAPB, Georgia Dep't of Natural Resources) to Gordon R. Alphonso (G-P)(Sept. 12, 1994) (emphasis added)(Attachment 94). Thus, Georgia's interpretation of its federally-approved PSD program prevails and the Georgia-PSD-related allegations in the NOV should be disregarded.

Mr. Clare H. Fancy, P.E.
Chief
Bureau of Air Regulation
RE: Georgia-Pacific Hawthorne Plywood Plant
Press Permitting Issues

Attachment 'C'

Georgia-Pacific Corporation's Response To Clean Air Act Notice of Violation No. 9401-HQ-CAA-113, November 23, 1994, p. 44-50.

C. The Chronology Of EPA's Approach To Pre-Construction Emissions Assessment Shows That It Did Not Officially Interpret The PSD Rules To Employ A "Debottlenecking" Method During the Relevant Time Period.

In addition to framing the NOV on VOC measurements based on faulty, unpromulgated test methods applied after-the-fact, EPA appears to be pinning many alleged violations on a "debottlenecking" theme. The PSD regulations state that for a modification to be considered "major," the "net emissions increase" from that modification must be "significant." 40 C.F.R. § 52.21(b)(2)(i). The regulations define "net emissions increase" as:

> the amount by which the sum of the following exceeds zero:
>
> (a) Any increase in actual emissions from a particular physical change or change in method of operation at a stationary source; and
>
> (b) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

Id. at § 52.21(b)(3)(i). Increases in hours of operation or in the rate of production, as well as routine repair and replacement activities, are specifically excluded from the definition of a "major modification." Id. at §§ 52.21(b)(2)(iii)(a), 52.21(b)(2)(iii)(f).

As discussed below, in 1981 the Agency adopted the position that PSD applicability determinations should evaluate emissions increases associated with the modified unit only. The Agency then affirmed its "modified unit only" analysis on a number of occasions, including in 1983 in the context of a formal PSD rulemaking. More recently, without any explanation, Agency staff abruptly reversed this position, opining that PSD determinations should take into account ancillary emissions from non-modified units, i.e., so-called "debottlenecking" emissions. But EPA has never formalized its "debottlenecking" approach, nor has it ever given proper notice to the regulated community concerning its adoption by the Agency.

1. **Initial EPA Guidance.**

In January 1981, EPA first addressed the question of whether the PSD regulations require potential permittees to evaluate the PSD significance of a plant change based on estimated emissions increases associated with the modified unit only. EPA answered this in the affirmative, expressly rejecting the view that permittees must attempt to assess ancillary emissions increases from non-modified units. See Memorandum from Edward E. Reich (Director, EPA Division of Stationary Source Enforcement) to Charles Whitmore (Chief, Technical Analysis Section, Region VII) (Jan. 22, 1981) ("1981 DSSE Memorandum") (Attachment 34).

This early guidance addressed a classic "debottlenecking" question: whether a PSD review occasioned by the new construction of an ethanol plant needed to account for increased power plant emissions associated with the plant expansion. The 1981 DSSE Memorandum answered the question forthrightly: "the term 'net emissions increase' [means] any significant increase" in actual emissions "from the modification itself." Id. at 1 (emphasis added) (citing exemption for production-related emission increases set forth in 40 C.F.R. § 52.21(b)(2)(iii)(f)). Accordingly, the Director reviewed the expected emissions increase from the ethanol plant alone, and determined that it was below the PSD significance threshold. Id. at 1-2. With the concurrence of the Office of the General Counsel and the Office of Air Quality Planning and Standards, the Director concluded that the modification was not subject to PSD review, despite increased power plant emissions. Id. at 2.

2. **Repeated Confirmation Of Initial EPA Interpretation.**

EPA confirmed on at least four subsequent occasions that PSD evaluations should focus on emissions associated with the modified unit only. First, in March 1981, Region IV circulated a PSD Policy Determination that adopted the "modified unit only" approach exactly as described in the 1981 DSSE Memorandum. Referring specifically to the 1981 DSSE Memorandum, Region IV stated that emissions from a modification "by itself must be greater than de minimis to

trigger [PSD] review." See Memorandum from Thomas W. Devine (Director, EPA Air and Hazardous Materials Division, Region IV) to State/Local Directors (March 31, 1981) ("Region IV PSD Policy Determination" (emphasis added) (Attachment 35).

Region IV applied the "modified unit only" analysis in addressing a fact pattern strikingly similar to the allegations made in the G-P NOV: whether PSD review would be triggered by increased emissions owing to production level increases combined with construction of new units with de minimis emissions, actions which taken together would result in an emission increase above de minimis levels within a contemporaneous time frame. Region IV concluded that "this situation would not . . . trigger PSD, because the physical change (new unit) is not, by itself, greater than de minimis." Id. at 2 (citing 1981 DSSE Memorandum) (emphasis added).[23]

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[23] In reaching this conclusion, Region IV explicitly changed its initial reading of the regulations to comport with the position adopted in the 1981 DSSE Memorandum. The Region IV PSD Policy Determination laid out the Agency's position in a question-and-answer format, as follows:

> Question: A major source wishes to take two actions: 1) Increase production at a previously PSD-permitted emission unit; 2) Build a new emission unit with less than de minimis emissions. Emissions of fluorides from the two actions, when added together, are greater than de minimis and occur within the contemporaneous time from. Does the physical change (new unit) trigger PSD review because of the change in actual emissions at the previously permitted units being greater than de minimis?
>
> * * * *
>
> Question: In the previous example, what if the previously permitted source were an existing source which did not have a new source construction permit under the SIP?
>
> Answer: In this case, the proposed unit would be subject to PSD, since the net increase calculation would include the production rate increase from the existing source. After the new PSD permit is issued, the "slate is wiped clean," and only future increases and decreases would count.
>
> Change: As of 1/22/81, this situation would also not trigger PSD, because the physical changes (new unit) is not, by itself, greater than de minimis.

(continued...)

Second, in January 1983, EPA reaffirmed its position, as set forth in the 1981 DSSE Memorandum, that "the PSD regulations . . . exclude any modification from applicability that did not in and of itself result in a significant emission increase." Memorandum from Richard Biondi (Chief, EPA Regulations Analysis Section, Stationary Source Compliance Division) to Michael Johnston (Chief, Air Operations Section, Region X) at 1 (Jan. 5, 1983) ("January 1983 SSCD Memorandum") (emphasis added) (Attachment 36). Nevertheless, EPA expressly acknowledged that the PSD regulations were confusing on this point and in fact required clarifying amendments to "be published shortly" through notice-and-comment rulemaking. Id. at 2.

Third, in June 1983, EPA again affirmed the validity of the 1981 DSSE Memorandum, characterizing the modified unit only view as the "most practical." Memorandum from Sheldon Meyers (Director, Office of Air Quality Planning and Standards) to David P. Howekamp (Director, Air Management Division, Region IX) at 1 (June 7, 1983) ("June 1983 OAQPS Memorandum")(Attachment 37). In addition, the Agency reiterated its earlier observation that the PSD regulations were not clear on the issue and that "a clarifying amendment to the PSD regulations is advisable and [should be included] as part of the next set of proposed changes to the PSD regulations." Id. at 2.

Fourth, in August 1983, EPA published its approval of the modified unit only approach in a preamble statement that was published in the Federal Register. See 48 Fed. Reg. 38742 (Aug. 25, 1983). EPA stated that a PSD determination should be based on net emissions "that would result directly from the alteration at the unit or units subject to the alteration." Id. at 38746

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[23] (...continued)
Reference: 1/22/81 memo, DSSE to Charles Whitmore, Region VII.

Region IV PSD Policy Determination at 1-2 (emphasis added).

(emphasis added). The Agency explained that this evaluation should be completed by applying the "modified unit only" approach previously adopted in the 1981 DSSE Memorandum:

> On their face, the relevant definitions do not expressly state that an alteration must result by itself in a "significant" net increase in emissions in order to amount to a "major modification." EPA, however, has interpreted those definitions to provide as much. See Memorandum, Director, EPA Division of Stationary Source Enforcement, to Chief, Technical Analysis Section, EPA Region VII (January 22, 1981).

Id. at 38746 n.12 (reference included in text) (emphasis added). Thus, the "modified unit only" analysis adopted in the 1981 DSSE Memorandum consistently represented the Agency's official position, and indeed was put forward as such through formal notice to the regulated community in the Register. Since the issuance of the 1983 Federal Register notice, EPA has never formally or officially retracted its early position restricting PSD applicability review for a "modified unit only" approach and rejects debottlenecking effects as exempt production-related increases under 40 C.F.R. § 52,21(b)(2)(iii)(f).

3. State Adoption Of "Modified Unit Only" Approach.

During the early 1980s, seven of the eleven relevant states received EPA approval for their PSD programs by adopting the federal regulations. Thus, at the time that the states took primary responsibility for implementing the PSD program in their respective SIPs, the prevailing understanding of the PSD rules was that emissions were evaluated based upon a "modified unit only" approach. It was this understanding that the states took forward as they implemented their PSD programs, regardless of later opinions offered by EPA.

The State of Georgia recently confirmed this point. In its formal correspondence with G-P, the Georgia Air Protection Branch ("GAPB") summarized its historic approach in the late 1970s and throughout the 1980s as follows:

> Historically, in determining whether a physical change was subject to PSD review, the [GAPB] focused on the emission increases associated with the applied-for change. We did not consider whether such change allowed other plant equipment or processes, which were not physically changed, to run at higher production rates (than could be achieved prior to the change), and, therefore, we did not consider any increased emissions from the other unmodified equipment.

Letter from Robert H. Collom, Jr. (Chief, GAPB, Georgia Dep't of Natural Resources) to Gordon R. Alphonso (G-P) (Aug. 5, 1994) (emphasis added) (Attachment 38).

4. Court Approval Of "Modified Unit Only" Approach.

Courts have acknowledged and approved EPA's application of the "modified unit only" approach. Specifically, in Puerto Rican Cement Co. v. EPA, 889 F.2d 292, 297 (1st Cir. 1989), the court implicitly concluded that the "modified unit only" approach, which EPA was espousing in that case, was consistent with the PSD regulations. In Puerto Rican Cement, plaintiff sought to convert one of six kilns from a "wet" to a "dry" cement-making process and combine it with another kiln. In making a PSD applicability determination, EPA compared the actual emissions of the two unmodified kilns with the potential emissions of the one combined, modified kiln. The Agency did not take into account plant-wide emission increases associated with increased production levels which would occur due to the new configuration of the kilns.

The court recognized that EPA had taken into account only the potential emissions increases associated with the modified unit itself, and not plant-wide emissions increases that would be associated with increased levels of production that could be achieved at the facility. Id. at 297-98. The court did not object to this approach. Instead, it approved the Agency's focus on the emission increases that would be associated with the modified unit only, without considering the potential increases in emissions associated with increased production through the remaining, unmodified four kilns. Id. The court concluded that the "modified unit only" approach taken by the Agency was

consistent with the exemption for production-related emission increases set forth in 40 C.F.R. § 52.21(b)(2)(iii)(f). Id. at 298.

5. **Potential Reversal Of "Modified Unit Only" Approach.**

In 1990, the Agency for the first time informally announced its position, in a draft guidance manual, that ancillary, debottlenecking emissions should be included in PSD determinations. See NSR Manual at A.46 (Attachment 8).[24] The 1990 draft guidance manual has never been finalized. EPA has provided no explanation for the attempted reversal of its prior "modified unit only" analysis, or even acknowledged that the Agency has taken a contrary approach. Moreover, at no time did EPA give the regulated community formal published notice of any change whatsoever with respect to the "modified unit only" approach. To this day, the Agency does not appear to be adopting a clear or consistent position on this issue.[25] In any event, EPA certainly has not provided formal notice of any change in Agency position which would contradict its earlier "modified unit only" approach and all of the modifications made under that approach.

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[24] An NSR Guidance Notebook issued by EPA in 1988, consisting of a compilation of EPA memoranda, made summary reference to a previously-unpublished 1983 Agency memorandum which adopted an approach inconsistent with the "modified unit only" analysis. See New Source Review, Prevention of Significant Deterioration and Nonattainment Area Guidance Document at Item 4.27 (citing memorandum dated July 28, 1983, from the Director of the Stationary Source Compliance Division to a Region X official). The 1988 NSR Guidance Notebook, however, also made summary reference to the series of Agency memoranda discussed above that adopted the "modified unit only" approach during the early 1980s. Thus, in 1988 the Agency did not in any manner suggest which approach -- the "modified unit only" approach or the debottlenecking analysis -- was appropriate. At most, in 1988, the Agency for the first time publicly acknowledged the existence of a debottlenecking approach, but did not in any way explicitly endorse it.

[25] In 1992, for example, Region IV specifically excluded debottlenecking emissions from a PSD applicability determination. Region IV stated that emissions from an increase in production at an existing boiler that was associated with the refurbishing of an acid recovery facility should not be considered in evaluating PSD applicability. See Letter from Jewell A. Harper, Chief, Air Enforcement Branch, Region IV to James A. Joy, III, Bureau of Air Quality Control, SCDHEC 2 (Apr. 10, 1992) ("1992 Region IV Determination") (Attachment 39).

Florida Department of
Environmental Protection

Memorandum

TO: Christopher Kirts, District Air Program Administrator
Northeast District

FROM: Clair H. Fancy, Chief
Bureau of Air Regulation

DATE: September 9, 1996

SUBJECT: Georgia-Pacific Plywood Plant, Hawthorne, Florida

On September 6, we met with representatives of Georgia-Pacific regarding their project to control VOC emissions from their veneer dryers at their plywood plant in Hawthorne, Florida.

According to Georgia-Pacific, it is not feasible to treat emissions from the glue application and pressing operations simultaneously with emissions from veneer drying. This is due to the relatively large volume of VOC in low concentration emanating from the presses compared to the relatively small volume of high concentration evolved from the dryers. The control projects would be separate whether or not PSD review is applicable to this plant.

The Bureau of Air Regulation has determined that the District should review the construction permit application for the installation of the control equipment on the three existing veneer dryers in accordance with the consent order between Georgia-Pacific and EPA dated July 18, 1996. The consent decree provisions are also applicable requirements which should be considered when reviewing their Title V permit application.

The Bureau has also determined that the plant is a major PSD source with respect to any future projects. Any additional modifications resulting in emissions increases above the significance levels (e.g. 40 TPY of VOC, 25 TPY of PM, 100 TPY of CO) should be reviewed by this Bureau as PSD projects.

CHF/h

cc: Doug Neely, USEPA
Jewell Harper, USEPA
Tobin E. Finley, Georgia-Pacific
Lawrence Otwell, Georgia-Pacific
Pat Comer, DEP OGC

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA, Plaintiff, V. GEORGIA-PACIFIC CORPORATION, Defendant	CIVIL ACTION NO.

CONSENT DECREE

xc: Jim P
8/14

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA, Plaintiff, V. GEORGIA-PACIFIC CORPORATION, Defendant	)	CIVIL ACTION NO.

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America (hereinafter "Plaintiff" or "the United States"), on behalf of the United States Environmental Protection Agency (herein, "EPA") has filed a Complaint alleging that Defendant, Georgia-Pacific Corporation (herein, "G-P" or "Defendant") commenced construction of major emitting facilities and major modifications of major emitting facilities in violation of the Prevention of Significant Deterioration ("PSD") requirements at Part C of the Clean Air Act (the "Act"), 42 U.S.C. §§ 7470-7492, and the regulations promulgated thereunder at 40 C.F.R. § 52.21 (the "PSD Rules");

WHEREAS, Plaintiff further alleged that Defendant commenced construction of emitting facilities or modified emitting facilities without first obtaining the appropriate preconstruction permits required by the State Implementation Plans ("SIPs") approved pursuant to 42 U.S.C. § 7410;

WHEREAS, Plaintiff further alleged that Defendant failed to properly provide information to state and Federal regulatory agencies concerning potential air emissions from Defendant's facilities;

WHEREAS, EPA issued Notices of Violation with respect to such allegations to the Defendant on August 5, 1994 and May 18, 1995 (the "NOVs");

WHEREAS, the Defendant has denied and continues to deny the violations alleged in the NOVs and the Complaint;

WHEREAS, the United States and the Defendant have agreed that settlement of this action is in the best interest of the parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter; and

WHEREAS, the United States and the Defendant have consented to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, and without any admission of the violations alleged in the Complaint or Notices of Violation, it is hereby ORDERED AND DECREED as follows:

I. JURISDICTION AND VENUE

1. The Complaint states a claim upon which relief can be granted against the Defendant under Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and 28 U.S.C. § 1355. This Court has jurisdiction of the subject matter herein and over the

parties consenting hereto pursuant to 28 U.S.C. § 1345 and pursuant to Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477. The Defendant does not admit and furthermore reserves its rights to contest the jurisdiction of this Court over, and to award relief for, subject matters or activities not expressly covered or required by this Consent Decree. Venue is proper under Section 113(b) of the Act, 42 U.S.C. § 7413(b), and under 28 U.S.C. § 1391(b) and (c). The Parties agree that nothing in this Consent Decree nor the fact that it is being entered into shall constitute any admission of fact or conclusion of law.

II. APPLICABILITY

2. The provisions of this Consent Decree shall apply to and be binding upon the United States and upon the Defendant as well as the Defendant's officers, employees, agents, successors and assigns. In the event Defendant proposes to sell or transfer any of its real property or operations subject to this Consent Decree, it shall advise in writing to such proposed purchaser or successor-in-interest of the existence of this Consent Decree, and shall send a copy of such written notification by certified mail, return receipt requested, to EPA before such sale or transfer, if possible, but no later than the closing date of such sale or transfer. The Defendant shall provide a copy of this Consent Decree to the vendor(s) supplying the VOC control technology systems required by Part IV of this Consent Decree.

III. FACTUAL BACKGROUND

3. Defendant owns and operates the following plywood facilities in the United States:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Cedar Springs, Georgia (no longer in operation)
Madison, Georgia
Monticello, Georgia
Warm Springs, Georgia
Gloster, Mississippi
Louisville, Mississippi
Taylorsville, Mississippi
Dudley, North Carolina
Whiteville, North Carolina
Prosperity, South Carolina
Russellville, South Carolina
Emporia, Virginia

4. Defendant owns and operates a medium density fiberboard ("MDF") facility in Holly Hill, South Carolina.

5. Defendant owns and operates the following particleboard facilities in the United States:

Martell, California
Vienna, Georgia
Gaylord, Michigan
Oxford, Mississippi
Taylorsville, Mississippi
Louisville, Mississippi
Russellville, South Carolina
South Boston, Virginia

6. Defendant owns and operates the following oriented strand board ("OSB") facilities in the United States:

Woodland, Maine
Dudley, North Carolina
Grenada, Mississippi
Skippers, Virginia

7. The United States issued the NOVs to G-P alleging that G-P failed to properly document and identify to the appropriate permitting authorities potential emissions increases associated with the facilities identified in paragraphs 3 through 6.

IV. COMPLIANCE PROGRAM

A. PLYWOOD PLANTS

8. G-P shall obtain PSD or federally enforceable state minor source permits, based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in these permits) and Paragraph 11, for plywood dryers at the following ten plywood plants at issue in this case:

Peterman, Alabama
Talladega, Alabama
Crossett, Arkansas
Fordyce, Arkansas
Hawthorne, Florida
Madison, Georgia
Monticello, Georgia
Dudley, North Carolina
Louisville, Mississippi
Taylorsville, Mississippi

9. G-P shall obtain a federally enforceable minor source permit based on reductions achieved through technology as specified in Paragraph 10 (except that the 95% VOC destruction efficiency to be specified to equipment vendors will not be contained in the permit) and Paragraph 11 for dryers at the Skippers, Virginia OSB plant.

10. G-P shall install improved pollution control technology systems for control of volatile organic compounds ("VOCs") consisting of Regenerative Thermal Oxidation ("RTO"), Regenerative Catalytic Oxidation ("RCO") or other EPA-approved equivalent control technology systems ("control technology systems") on "hot zone" exhausts of the veneer dryers at the plants identified in Paragraph 8 and on the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P will specify in orders placed with equipment vendors that these controls have the design capacity for at least 95% destruction of VOCs.

11. G-P shall capture all VOC emissions from "hot zone" stacks of the veneer dryers and minimize fugitive emissions from dryer doors (through appropriate operation and maintenance procedures) and the "green end" of dryers (through proper balancing of "hot zone" exhausts) at the plants identified in Paragraph 8, and shall capture all VOC emissions from the rotary chip dryer exhaust at the plant specified in Paragraph 9. G-P shall achieve a minimum destruction efficiency of 90% for the captured VOC emissions at all dryers at the plants identified in Paragraphs 8 and 9 as demonstrated by compliance with the requirements of Parts IV.A. and IV.C. The 90% destruction efficiency need not be maintained during periods when the dryer(s) are not operating or during previously scheduled startup and shutdown periods (including bakeouts and washouts), and Force Majeure events (including malfunctions which qualify as Force

Majeure events). These startup and shutdown periods shall not exceed the minimum amount of time necessary for these events, and during these events, G-P shall minimize emissions to the greatest extent practicable. G-P must, at the beginning of every month, record its maintenance schedule for that month. To the extent practical, startup and shutdown of control technology systems will be scheduled during times when process equipment is also shut down for routine maintenance.

12. The schedules for installation, startup, and compliance testing of the control technology systems shall be in accordance with the following:

1. Installation of Control Technology Systems

a. Phase One

i. Within one (1) month from execution of this Consent Decree (hereinafter "execution of the Consent Decree" means the date on which the final signature of the parties required by this Consent Decree is obtained), G-P shall apply for state construction permits and/or construction permit waivers for placement of purchase orders for control technology systems and place purchase orders for plywood dryer control technology systems for initial full-scale prototype plant installations at two of the plywood plants listed in paragraph 8 (hereinafter, these two plants shall be referred to as the "Phase One plants").

ii. Within three (3) months from execution of this Consent Decree, G-P will inform EPA of the type of control technology systems to be installed at the Phase One plants and provide a copy of the preliminary design drawings.

iii. Within four (4) months from execution of this Consent Decree, G-P shall take delivery of the control technology systems and commence installation at the Phase One plants.

iv. Within seven (7) months from execution of this Consent Decree, G-P shall complete installation of the control technology systems and start up controls at the Phase One plants.

v. Within ten (10) months from execution of this Consent Decree, G-P shall complete shake-down and debugging, and commence full-time operation of the control technology systems at the Phase One plants.

vi. Within twelve (12) months from execution of this Consent Decree, G-P shall submit test results demonstrating compliance at the Phase One plants with the destruction efficiency specified in Paragraph 11.

b. Phase Two

i. Within twelve (12) months from execution of this Consent Decree, G-P shall apply for state construction permits and/or construction permit waivers for placement of purchase orders for the control technology systems, and place purchase orders for plywood dryer control technology systems at the remaining eight (8) plywood plants listed in paragraph 8 (hereinafter, these plants shall be referred to as the "Phase Two plants"). At this time G-P shall also inform EPA of the type of control technology systems to be installed at the Phase Two plants and provide a copy of preliminary design drawings.

ii. Within twenty-six (26) months from execution of this Consent Decree, G-P shall complete shake-down and debugging, and commence full-time operation of the control technology systems for the Phase Two plants.

iii. Within thirty (30) months from execution of this Consent Decree, G-P shall submit test results demonstrating compliance with the destruction efficiency requirement specified in Paragraph 11 at the Phase Two plants.

c. Skippers, Virginia OSB Plant

13. As to the Skippers, Virginia OSB plant, G-P shall apply for a federally enforceable minor source permit within 120 days from execution of this Consent Decree; G-P shall place the purchase order for the control technology systems within 30 days of the issuance of the permit, and within 12 months from execution of this Consent Decree, G-P shall obtain the permit, install and start up the control technology systems and demonstrate compliance with the destruction efficiency specified in Paragraph 11 above.

2. Option To Install Alternate Control Technology

14. Subject to the requirements of this Paragraph and Paragraph 15, Defendant may elect to install an alternate control technology system, in lieu of the RTO-based or RCO-based control technology systems for any Phase Two plant provided that such alternate control technology system meets the destruction efficiency requirement provided in Paragraph 11, and further that any such alternate control technology system is installed in accordance with the schedules set out for Phase Two plants in paragraph 12(b).

15. If Defendant decides to install an alternate control technology system at any Phase Two plant, it shall advise the United States of its intent to do so not later than 60 days before it is required by the schedules in Paragraph 12(b) to contract for the procurement of the control technology system.

At this time the Defendant shall provide to EPA preliminary design information for the proposed control technology system and data which demonstrate that the proposed control technology system will meet the destruction efficiency provided in Paragraph 11. EPA will advise G-P within 30 days of receipt of this information as to whether G-P may go forward with the installation of the proposed alternative control technology system. In the event that Defendant's proposal to install the alternate control technology system is under review by EPA beyond 30 days, EPA shall agree to extend any or all affected Phase Two plant deadlines or milestones by an equivalent period of time.

3. Initial Compliance Determination

16. To demonstrate initial compliance with the destruction efficiency requirement specified in Paragraph 11, G-P will undertake compliance testing at the Phase One and Phase Two plants and the Skippers, Virginia OSB plant in accordance with the schedules set out in paragraphs 12 and 13 and the test protocol attached as Schedule A to this Consent Decree.

17. EPA shall advise G-P within 30 days of receipt of the compliance test results whether the destruction efficiency required by this Consent Decree as set out in paragraph 11 have been met. If EPA advises that this efficiency has not been met, G-P will be subject to the stipulated penalties set forth in paragraph 51(g)(1).

4. Subsequent Compliance Determination

18. G-P shall conduct, at least bi-annually (or more frequently as agreed by the parties), compliance demonstration tests in accordance with Schedule A to show compliance with the destruction efficiency requirement set out in Paragraph 11. Failure to achieve the destruction efficiency provided in Paragraph 11 from the dryers as shown by such tests shall subject G-P to stipulated penalties as set forth in Paragraph 51(g)(1).

B. PERMITS

19. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase One plants as soon as possible, but in no event later than 120 days after execution of this Consent Decree.

20. G-P shall apply for PSD or federally enforceable state minor source permits as triggered by the VOC emissions from plywood dryers at the Phase Two plants as soon as possible, but in no event later than twelve months after execution of this Consent Decree.

21. G-P agrees to obtain all appropriate federally enforceable permits for all of the plywood press modifications identified in Schedule B hereto. G-P will apply to the applicable state regulatory authority for such permits as the state determines are necessary as soon as practicable, but in no event later than 120 days after execution of this Consent Decree. The United States and G-P agree to abide by the state

determination, in each state where the facilities are located, of the appropriate permits and control technology, if any, required for the press modifications.

22. G-P has stated that it is contemplating either permanently closing the existing South Boston, Virginia, particleboard facility within one year of execution of this Consent Decree, or building a new particleboard facility adjacent to the existing South Boston particleboard facility and permanently closing the existing facility upon completion of the new facility. G-P shall provide the United States with notification within one year of execution of this Consent Decree of its intentions concerning the South Boston, Virginia facility. If G-P elects to build a new facility, it shall perform a PSD applicability analysis for the new facility that includes VOC emissions from all relevant equipment, including dryers and presses, and not later than two and one-half years after execution of this Consent Decree will close the existing South Boston facility. Based on the PSD applicability analysis, G-P will obtain the appropriate permits prior to start-up of the new facility. If G-P notifies EPA of its intent to close the facility within this one-year period, and then continues to operate the existing facility later than one year after execution of this Consent Decree, it will be subject to stipulated penalties as set forth in Paragraph 51(c), and G-P shall do a PSD

applicability analysis for the 1986 dryer modification at the existing South Boston facility.

23. G-P will apply to the state regulatory authority for a federally enforceable minor modification permit for the alleged 1989 dryer modification at the Gloster, Mississippi plywood plant. The permit application for this permit will state that the plant's physical production capacity after the alleged modification is 307,000 MSF, 3/8" basis. G-P will apply to the state regulatory authority for this permit as soon as practicable, but in no event later than 120 days after execution of this Consent Decree.

24. G-P will apply to the state regulatory authority for a federally enforceable synthetic minor source permit for the alleged 1994 dryer modification at the Holly Hill, S.C., MDF plant that will limit monthly production to 12.31 MMSF, 3/4" basis for five-week months, and 9.85 MMSF 3/4" basis for four-week months, and a weekly production limit of 2.8 MMSF, 3/4" basis. Until the state permit is obtained that contains these permit limits, these limits shall be imposed through this Consent Decree.

C. PARAMETRIC MONITORING

25. The provisions of this Part IV.C. are intended to assure continuous compliance with this Consent Decree and to allow G-P to quickly determine the need for maintenance or adjustment of the control technology systems. In order to

achieve and maintain the destruction efficiency provided in Paragraph 11 that is required of the control technology systems, G-P will establish a continuous parametric monitoring system at each of the plants identified in paragraphs 8 and 9. Parametric monitoring shall be conducted by establishing, through testing or otherwise, the parameters needed to be controlled (e.g., temperature, pressure drop across the system, and airflow for an RTO device; and catalyst temperature, pressure drop across the system and airflow from an RCO device), and the appropriate operating criteria to be maintained for each such parameter in order to ensure proper operation of the control technology system installed at a plant.

26. Immediately following the commencement of full-time operations of the control technology system required by this Consent Decree, but in no event later than twelve months from the execution of this Consent Decree for the Phase One plywood plants, thirty months for the Phase Two plywood plants, and twelve months for the Skippers, Virginia OSB plant, G-P shall commence a study, not to exceed six months in duration, of the control technology system to establish the parameters needed to be controlled and monitored as well as the appropriate operating criteria to be maintained for each such parameter in order to ensure proper operation of the control technology system. The results of such study and the associated proposed parametric monitoring protocol shall be submitted to EPA for review and

approval no later than six months from the date of the initial compliance testing as set out in paragraphs 12 and 13. Each study should establish for the affected unit an appropriate relationship between two or more operational parameters (depending upon which control technology system is implemented by G-P) and the destruction efficiency requirement provided in paragraph 11 of this Consent Decree. G-P should include in the study for each facility its proposed process parameters to be monitored and appropriate operating criteria. Studies for the Phase Two plants may be abbreviated in scope to the extent that determinations made during the studies for either the Phase One plants or earlier Phase Two plants are applicable to the subsequent studies. EPA will have 30 days to review and comment on the results of each facility's study and the proposed process parameters, during which time EPA will have the opportunity to request clarification or additional data from G-P to support the proposed parameters before determining that the study is complete. Once EPA determines that the study is complete, EPA will have 30 days to approve or disapprove the proposed parameters. The parametric monitoring system developed for each facility shall be incorporated into that facility's Title V permit by the permitting authority.

27. Within six months after EPA's approval of any parametric monitoring program for a control technology system at a plant, G-P shall have the necessary data recording equipment

for the monitoring program installed and operating at that plant, or have established manual data recordkeeping procedures.

28. No later than six months after EPA's approval of the parametric monitoring program, G-P shall begin monitoring and recording of the parameters. G-P shall monitor and record at each facility listed in Paragraphs 8 and 9 of this Consent Decree each parameter at least every 15 minutes and shall average the readings over a 12-hour period. To demonstrate compliance, G-P will provide EPA with a summary of its parametric monitoring data in accordance with Part V. Failure to monitor parameters at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(d). Failure to record the results of parametric monitoring at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(h). Failure to report the results of parametric monitoring at any of the facilities listed in Paragraphs 8 and 9 will subject G-P to stipulated penalties as set forth in Paragraph 51(h). Failure to operate the control technology system within the approved parametric criteria will subject G-P to stipulated penalties as set forth in Paragraph 51(g)(2).

29. G-P's parametric monitoring devices will be calibrated or reevaluated based on compliance demonstration tests at the affected units as required in Paragraph 18, for the life of this Consent Decree. G-P shall provide EPA with an annual report

documenting its calibration or review of the parameters and propose changes if necessary. EPA will have the opportunity to request clarification or additional data from G-P to support the proposed changes. EPA will have 30 days after receipt of G-P's annual report to approve or disapprove any proposed changes to the parameters.

D. ENVIRONMENTAL AUDITS

30. The purpose of the environmental audits required by this Consent Decree is to obligate G-P to continue its review of the Clean Air Act compliance status, programs and practices of the Defendant's wood panel plants identified in Paragraphs 3-6, except lumber kilns, after implementation of the control technology systems, and testing requirements of this Consent Decree.

31. G-P has submitted to the United States for review a summary description of its environmental audit program, including the procedures and protocol, and the United States has agreed that G-P's current audit program (the "Audit Program") will satisfy the requirements of this Part IV.D. of this Consent Decree.

32. The Audit Program shall continue to include an evaluation of the recordkeeping practices, operating practices, pollution control strategies and technology of the Defendant as it relates to compliance with the Act at the plants identified in Paragraphs 3-6.

33. This Audit Program shall be conducted by G-P's internal environmental audit group ("Audit Group"). The Audit Group shall conduct its independent audit and prepare a report of its findings and recommendations.

34. Prior to conducting any audits of the plants identified in Paragraphs 3-6 after execution of this Consent Decree, the Audit Group must review for each plant the following as established from either the date of execution of this Consent Decree or from the last audit following execution of this Consent Decree, whichever is later, to the present:

1. general facility layout and plant operations;
2. plant production capacities;
3. permitting effect under the Act of any modifications to existing sources or the installation of new emissions source equipment;
4. emission monitoring, recordkeeping and reporting procedures;
5. applicable permit terms and conditions;
6. compliance history under the Act at each plant;
7. technical issues that affect the ability of the plant to comply with all applicable requirements of the Act, including state and Federal regulations and permit terms and conditions issued pursuant to the Act; and
8. plant management practices and procedures to assure compliance with the Act's requirements.

35. The Audit Program includes use of auditing protocols, procedures, and specific tasks for the audit, but does not restrict the Audit Group from conducting such inquiries as may be necessary to accomplish the purposes of the audit.

36. The Audit Program also includes a schedule for conducting the audit, and a schedule for the completion of all tasks established for the audit.

37. The Audit Group shall focus on determining compliance with applicable regulations under the Act as of the date of the audit. The Audit Group shall have access to and may review any records which will assist it in determining the Defendant's current compliance with applicable regulatory requirements of the Act, including state permitting records and historical records, as may be necessary.

38. G-P shall continue to employ a third party consultant's periodic participation in actual audits and assistance to the Audit Group throughout the process to ensure that G-P's audit procedures are followed. G-P will implement appropriate recommendations from the audit consultant to change the Audit Program.

39. The Audit Group shall have access to all units, areas, equipment, and structures at G-P's wood panel plants identified in Paragraphs 3-6, except lumber kilns, and shall perform an onsite inspection of each listed plant.

40. The Audit Group shall observe and review actual operation and maintenance procedures for the Defendant's wood panel plants identified in Paragraphs 3-6, as needed to determine present compliance with the Act and may request such information as necessary. The facility shall arrange for the collection of

the requested information, and the Audit Group shall be given the opportunity to observe and review such information.

41. G-P shall conduct its audits in accordance with its normal audit cycle/schedule, provided, however, that each of the wood panel plants identified in Paragraphs 3-6 of this Consent Decree, including co-located wood products facilities (except co-located wood kilns), is audited at least once during the life of this Consent Decree.

42. G-P shall submit a final Audit Summary Report in accordance with Paragraph 43 to EPA not later than sixty (60) days after completion of such audit. G-P shall provide two copies of the Audit Summary Report to EPA.

43. The Audit Summary Report shall describe the pertinent results of the audit, including but not limited to the following:

1. the procedures followed during the audit, including any deviations;

2. a description of each of the audited plants, including, where necessary to evaluate current compliance, the regulatory history of the plant(s);

3. the current compliance status of each plant, including any potential compliance issues;

4. any deviations observed during the audit, including identification of any untimely response to malfunctioning control technology systems or exceedances of applicable permit limits;

5. recommendations for corrections of observed deviations as provided in item 4 above and potential improvements or modifications that should be made to the facility's environmental compliance management program or operating

procedures to achieve and/or maintain compliance with all applicable Air Act requirements, and

6. a statement that any failure to comply with the Act detected by the audits has been or will be corrected.

44. G-P shall have the third party auditing consultant review some of the audits conducted at the facilities covered by this Consent Decree as part of the audit consultant's review of G-P's internal Audit Program. The third party consultant shall provide an annual certification to EPA that states as follows:

> I certify under penalty of law that G-P has implemented and followed the procedures outlined in G-P's Audit Program for the past calendar year and has adopted the following changes to its existing Audit Program recommended by me.

V. REPORTING AND RECORDKEEPING

45. Beginning with G-P's first full fiscal quarter beginning after entry of this Consent Decree, the Defendant shall submit a quarterly progress report to EPA within thirty (30) days after the end of each of G-P's fiscal quarters during the life of this Consent Decree. This report shall contain the following:

a. progress report on the implementation of the requirements of Part IV above;

b. weekly and monthly production at the Holly Hill, South Carolina facility to demonstrate compliance with the production limits imposed on that plant by paragraph 24 above;

c. a summary of the parametric monitoring data required by this Consent Decree for the quarter;

d. a description of any problems anticipated with respect to meeting the compliance program requirements; and

e. a description of all SEP implementation activity in accordance with Schedule D of this Consent Decree.

46. The quarterly report shall be certified by the Director of Corporate Environmental Engineering - Building Products as follows:

> I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

VI. CIVIL PENALTY

47. Within thirty (30) calendar days of entry of this Consent Decree, the Defendant shall pay to the United States a civil penalty pursuant to Section 113 of the Act, 42 U.S.C. § 7413 in the amount of six million dollars ($6,000,000.00). The civil penalty shall be paid by cashier's check or certified check in the sum stated above made payable to the "Treasurer, United States of America," and sent to

> United States Attorney
> Northern District of Georgia
> 1800 United States Courthouse
> 75 Spring Street, S.W.
> Atlanta, Georgia 30335

48. A photocopy of the check shall be sent to the United States as set out in the Notice provision of Paragraph 79 of this Consent Decree.

49. No amount of the civil penalty to be paid by G-P shall be used to reduce its federal or state tax obligations.

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

50. G-P shall implement certain supplemental environmental project(s) ("SEP(s)"), at an aggregate cost of $4.25 million, in accordance with Schedule D to this Consent Decree. G-P agrees that in any public statements regarding the funding of these SEPs, G-P must clearly indicate that these projects are being undertaken as part of the settlement of an enforcement action for alleged Clean Air Act violations. No amount of the $4.25 million to be paid by G-P for SEPs shall be used to reduce its federal or state tax obligations.

IX. STIPULATED PENALTIES

51. The Defendant shall pay stipulated penalties to the United States for each failure by the Defendant to comply with the terms of this Consent Decree. The stipulated penalties will be calculated in the following amounts:

(a) for failure to meet the deadlines for installation of control technology systems and permitting for the Phase One and Phase Two plants, per day per plant:

1st through 30th day after deadline	$1,250

31st through 60th day after deadline $3,000

Beyond 60th day $6,500

(b) for each exceedance of the weekly or monthly production limits at the Holly Hill facility as specified in paragraph 24 of this Consent Decree, the following penalties:

	Less than or equal to 10% above the production limits	Greater than 10% above the production limits
Exceedance of the Weekly Production limit	$ 750	$2,500
Exceedance of the Monthly production limit	$ 2,500	$8,000

(c) for each day of continued operation of the existing South Boston facility later than one year after execution of this Consent Decree after having notified EPA of its intent to close the facility within this one-year period:

1st through 30th day after deadline $1,500

31st through 60th day after deadline $3,250

Beyond 60th day $5,000

(d) for each day of failure to conduct parametric monitoring at any plant covered by this Consent Decree following six months after EPA's approval of G-P's parametric monitoring program at that plant:

1st through 30th day after deadline $1,000

31st through 60th day after deadline $2,000

Beyond 60th day $5,000

(e) for failure to conduct a compliance test as required by Paragraph 18, or failure to calibrate parametric monitors as required by Paragraph 29, per day per plant:

1st through 30th day after deadline	$1,000
31st through 60th day after deadline	$2,000
Beyond 60th day	$5,000

(f) for failure to implement the SEPs as set forth in Paragraph 50 and Schedule D hereto, $5,000 per day; provided, however, that if G-P has made good faith and timely efforts to complete the SEP(s), and certifies, with supporting documentation, that at least 90 percent of the amount of money which was required to be spent was expended on the SEP(s), no stipulated penalty shall be imposed.

(g)(1) for each failure to achieve the minimum 90% destruction efficiency required by Paragraph 11 for the control technology system as shown by compliance demonstration stack tests, per test:

Less than or equal to 10% below the destruction efficiency set forth in ¶11	Greater than 10% below the destruction efficiency set forth in ¶11
$10,000	$15,000

(g)(2) for the cumulative number of days within any month for which the required parametric monitoring specifications under Part IV.C. are not met, per day per plant:

	Less than or equal to 10% variance from the specified parametric criteria	Greater than 10% variance from the specified parametric criteria
at least two but less than seven days of the month	$1,500	$2,500
at least seven but less than twelve days of the month	$2,500	$5,000
at least twelve days up to the end of the calendar month	$3,750	$7,500

(h) for each failure to submit reports or studies, as required by any part of this Consent Decree or to provide any notice required by this Consent Decree, per day per report or notice:

1st through 30th day after deadline	$350
31st through 60th day after deadline	$750
Beyond 60th day	$1,250

(i) for failure to pay the civil penalty as specified in Part VI of this Consent Decree, $25,000 per day plus interest on the amount overdue at the rate specified in 31 U.S.C. § 3717.

(j) for failure to pay or escrow stipulated penalties, as specified in Paragraph 53 of this section, $2,500 per day per penalty demand.

52. Defendant shall pay stipulated penalties upon written demand by the United States no later than thirty (30) days after Defendant receives such demand. Stipulated penalties shall be paid to the United States in the manner set forth in Part VIII of this Consent Decree.

53. Should Defendant dispute its obligation to pay part or all of a stipulated penalty, it may avoid the imposition of the stipulated penalty for failure to pay a penalty due to the United States, by placing the disputed amount demanded by the United States, not to exceed $50,000 for any given event or related series of events at any one plant, in a commercial escrow account pending resolution of the matter and by invoking the Dispute Resolution provisions of Part XI within the time provided in this Part VIII for payment of stipulated penalties. If the dispute is thereafter resolved in Defendant's favor, the escrowed amount plus accrued interest shall be returned to the Defendant, otherwise the United States shall be entitled to the escrowed amount that was determined to be due by the Court plus the interest that has accrued on such amount, with the balance, if any, returned to the Defendant.

54. The United States reserves the right to pursue any other remedies to which it is entitled, including, but not limited to, additional injunctive relief for Defendant's violations of this Consent Decree. The United States will not

seek stipulated penalties and civil penalties for the same violation of the Consent Decree.

IX. RIGHT OF ENTRY

55. Any authorized representative of the EPA or an appropriate state agency, including independent contractors, upon presentation of credentials, shall have a right of entry upon the premises of Defendant's plants identified herein at any reasonable time for the purpose of monitoring compliance with the provisions of this Consent Decree, including inspecting plant equipment, and inspecting and copying all records maintained by Defendant required by this Consent Decree. Defendant shall retain such records for a period of five (5) years. Nothing in this Consent Decree shall limit the authority of EPA to conduct tests and inspections under Section 114 of the Act, 42 U.S.C. § 7414.

X. FORCE MAJEURE

56. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree, Defendant shall notify the Plaintiff in writing as soon as practicable, but in any event within seven (7) business days of when Defendant first knew of the event or should have known of the event by the exercise of due diligence. In this notice Defendant shall specifically reference this Paragraph of this Consent Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, and

the measures taken or to be taken by Defendant to prevent or minimize the delay and the schedule by which those measures will be implemented. Defendant shall adopt all reasonable measures to avoid or minimize such delays.

57. Failure by Defendant to comply with the notice requirements of Paragraph 56 as specified above shall render this Part X voidable by the United States as to the specific event for which the Defendant has failed to comply with such notice requirement, and, if voided, is of no effect as to the particular event involved.

58. The United States shall notify the Defendant in writing regarding the Defendant's claim of a delay or impediment to performance within thirty (30) days of receipt of the Force Majeure notice provided under Paragraph 56. If the United States agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of the Defendant, including any entity controlled by the Defendant, and that the Defendant could not have prevented the delay by the exercise of due diligence, the parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances. Such stipulation shall be filed as a modification to this Consent Decree pursuant to the modification procedures established in this Consent Decree. The

Defendant shall not be liable for stipulated penalties for the period of any such delay.

59. If the United States does not accept the Defendant's claim of a delay or impediment to performance, the Defendant must submit the matter to this Court for resolution to avoid payment of stipulated penalties, by filing a petition for determination with this Court. Once the defendant has submitted this matter to this Court, the United States shall have fifteen business days to file its response to said petition. If the Defendant submits the matter to this Court for resolution and the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of the Defendant, including any entity controlled by the Defendant, and that the Defendant could not have prevented the delay by the exercise of due diligence, the Defendant shall be excused as to that event(s) and delay (including stipulated penalties), for a period of time equivalent to the delay caused by such circumstances.

60. The Defendant shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was caused by or will be caused by circumstances beyond its control, including any entity controlled by it, and that the Defendant could not have prevented the delay by the exercise of due diligence. The Defendant shall also bear the burden of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date based on a particular event may,

but does not necessarily, result in an extension of a subsequent compliance date or dates.

61. Unanticipated or increased costs or expenses associated with the performance of the Defendant's obligations under this Consent Decree shall not constitute circumstances beyond the control of the Defendant, or serve as a basis for an extension of time under this Part. However, failure of a permitting authority to issue a necessary permit in a timely fashion may be an event of Force Majeure where the failure of the permitting authority to act is beyond the control of the Defendant and Defendant has taken all steps available to it to obtain the necessary permit including but not limited to:

a. submitting a complete permit application;

b. responding to requests for additional information by the permitting authority in a timely fashion;

c. accepting lawful permit terms and conditions; and

d. prosecuting appeals of any unlawful terms and conditions imposed by the permitting authority in an expeditious fashion.

62. Notwithstanding any other provision of this Consent Decree, this Court shall not draw any inferences nor establish any presumptions adverse to either party as a result of defendant delivering a notice of Force Majeure or the parties' inability to reach agreement.

63. As part of the resolution of any matter submitted to this Court under this Part X, the parties by agreement, or this

Court, by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance agreed to by the United States or approved by this Court. Defendant shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XI. DISPUTE RESOLUTION

64. The dispute resolution procedure provided by this Part XI shall be available to resolve all disputes arising under this Consent Decree, except as otherwise provided in Part X regarding Force Majeure, provided that the party making such application has made a good faith attempt to resolve the matter with the other party.

65. The dispute resolution procedure required herein shall be invoked upon the giving of written notice by one of the parties to this Consent Decree to another advising of a dispute pursuant to this Part XI. The notice shall describe the nature of the dispute, and shall state the noticing party's position with regard to such dispute. The party receiving such a notice shall acknowledge receipt of the notice and the parties shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days from the receipt of such notice.

66. Disputes submitted to dispute resolution shall, in the first instance, be the subject of informal negotiations between the parties. Such period of informal negotiations shall not extend beyond thirty (30) calendar days from the date of the first meeting between representatives of the United States and the Defendant, unless the parties' representatives agree to shorten or extend this period.

67. In the event that the parties are unable to reach agreement during such informal negotiation period, the United States shall provide the Defendant with a written summary of its position regarding the dispute. The position advanced by the United States shall be considered binding unless, within thirty (30) calendar days of the Defendant's receipt of the written summary of the United States position, the Defendant files with this Court a petition which describes the nature of the dispute. The United States shall respond to the petition within forty-five (45) calendar days of filing.

68. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Part XI may be shortened upon motion of one of the parties to the dispute.

69. Notwithstanding any other provision of this Consent Decree, in dispute resolution, this Court shall not draw any inferences nor establish any presumptions adverse to either party

as a result of invocation of this Part XI or the parties' inability to reach agreement.

70. As part of the resolution of any dispute submitted to dispute resolution, the parties, by agreement, or this Court, by order, may, in appropriate circumstances, extend or modify, the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of dispute resolution. Defendant shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule.

XII. GENERAL PROVISIONS

71. Effect of Settlement. This Consent Decree is not a permit; compliance with its terms does not guarantee compliance with all applicable Federal, State or Local laws or regulations.

72. G-P shall be able to use or rely on the emission reductions generated as a result of the control technology systems installed at the plants identified in Paragraphs 8 and 9 of this Consent Decree in any Federal or State emission averaging, banking, trading, or similar emission compliance program only to the extent of any reductions in excess of 95 percent of VOCs removed pursuant to the provisions of Paragraphs 10 and 11.

73. Satisfaction of all of the requirements of this Consent Decree constitutes full settlement of and shall resolve all civil and administrative liability of the Defendant to the United

States for PSD and minor source permitting violations covering all criteria pollutants for the modifications listed in Schedule C to this Consent Decree, any other violations alleged in the August 5, 1994 and May 18, 1995 NOVs, or in the United States' Complaint.

74. Other Laws. Except as specifically provided by this Consent Decree, nothing in this Consent Decree shall relieve Defendant of its obligation to comply with all applicable Federal, State and Local laws and regulations. Subject to Paragraph 73, nothing contained in this Consent Decree shall be construed to prevent or limit the United States' rights to obtain penalties or injunctive relief under the Act or other federal, state or local statutes or regulations, including but not limited to, Section 303 of the Act, 42 U.S.C. § 7603.

75. Third Parties. This Consent Decree does not limit, enlarge or affect the rights of any party to this Consent Decree as against any third parties.

76. Costs. Each party to this action shall bear its own costs and attorneys' fees.

77. Public Documents. All information and documents submitted by the Defendant to the United States pursuant to this Consent Decree shall be subject to public inspection, unless subject to legal privileges or protection or identified and supported as business confidential by the Defendant in accordance with 40 C.F.R. Part 2.

78. Public Comments. The parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the requirements of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and consideration of any comments.

79. Notice. Unless otherwise provided herein, notifications to or communications with the United States or the Defendant shall be deemed submitted on the date they are postmarked and sent either by overnight receipt mail service or by certified or registered mail, return receipt requested. Except as otherwise provided herein, when written notification to or communication with the United States, EPA, or the Defendant is required by the terms of this Consent Decree, it shall be addressed as follows:

As to the United States:

Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, DC 20044

United States Attorney
Northern District of Georgia
1800 United States Courthouse
75 Spring Street, S.W.
Atlanta, Georgia 30335

As to the U.S. EPA:

Director, Air Enforcement Division
Office of Enforcement and Compliance Assurance

Environmental Protection Agency
401 M Street, S.W.
Mail Code 2242A
Washington, DC 20460

Laxmi Kesari, Multimedia Enforcement Division
Office of Enforcement and Compliance Assurance
Environmental Protection Agency
401 M Street, S.W.
Mail Code 2248A
Washington, DC 20460

and
the EPA Regional Administrator for the region in which the facility is located

As to Georgia-Pacific Corporation:

Gordon R. Alphonso
Senior Counsel
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

Richard A. Moser
Director - Environmental Engineering
Building Products
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

80. Any party may change either the notice recipient or the address for providing notices to it by serving all other parties with a notice setting forth such new notice recipient or address.

81. Modification. There shall be no modification of this Consent Decree without written approval by both parties to this Consent Decree, or by Order of the Court.

82. Continuing Jurisdiction. The Court retains jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree

and to take any action necessary or appropriate for its interpretation, construction, execution, or modification. During the term of this Consent Decree, any party may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

XIII. TERMINATION

83. This Consent Decree shall be subject to termination upon motion by either party after the Defendant satisfies all requirements of this Consent Decree, including payment of all penalties that may be due to the United States under this Consent Decree, installation of control technology systems as specified herein, the receipt of all permits specified herein, EPA's receipt of the first quarterly progress report following the conclusion of one year's operation of the EPA-approved parametric monitoring system for the plants listed in Paragraphs 8 and 9 of this Consent Decree, and G-P's submission of a final report indicating that G-P has satisfied the requirements set forth in Schedule D and that all obligations for implementation of SEPs have been met. At such time, if the Defendant believes that it has maintained compliance with the requirements of this Consent Decree and the permits specified herein, and has paid the civil penalty and any stipulated penalties required by this Consent Decree, then the Defendant shall so certify to the United States,

and unless the United States objects in writing with specific reasons within 60 days of receipt of the certification, the Court shall order that this Consent Decree be terminated on Defendant's motion. If the United States so objects to the Defendant's certification, then the matter shall be submitted to the Court for resolution under Paragraphs 67-70 of this Consent Decree. If the parties cannot agree on Defendant's certification, then the disputing parties shall submit this matter to the Court for resolution. In such case, the Defendant shall bear the burden of proving that this Consent Decree should be terminated.

FOR PLAINTIFF, UNITED STATES OF AMERICA,

Dated: July 17, 1996

Lois J. Schiffer
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
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Dated: July 17, 1996

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Washington, DC 20005

Dated: July 17, 1996

Dianne Shawley
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Dated: 7/17/96

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Dated: 7/16/96

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Dated: 7/16/96

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Washington, DC 20460

Dated: 7/17/96

Steven A. Herman
Assistant Administrator
Office of Enforcement and Compliance
Assurance
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

FOR DEFENDANT, GEORGIA-PACIFIC CORPORATION

Dated: 7/17/96

James F. Kelley
Senior Vice President - Law
and General Counsel
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

Dated: 7/17/96

Gordon R. Alphonso
Senior Counsel
Georgia-Pacific Corporation
133 Peachtree Street, N.E.
Atlanta, Georgia 30303

Dated: 7/17/96

David T. Buente, Jr.
Sidley & Austin
1722 Eye Street, N.W.
Washington, D.C. 20006

So entered in accordance with the foregoing this _____ day of _____, 1996.

_____
United States District Court Judge
for the Northern District of
Georgia

SCHEDULE A

COMPLIANCE DETERMINATION TESTING PROTOCOL

Georgia-Pacific (G-P) agrees to undertake compliance determinations for the 11 facilities that will be installing improved pollution control devices under the consent decree according to the terms identified in this testing protocol. The following requirements are applicable both to plywood facilities and the Skippers OSB facility. Where a particular requirement is relevant to only one process, it is noted as such.

A. General Requirements

1. EPA may provide representatives, including contractors, to observe any tests.

2. Testing must be performed to determine emissions levels for volatile organic compounds (VOCs) entering and exiting the improved pollution control devices.

3. The test method to be used must be Method 25A for VOC emissions from dryers. Appropriate modifications to Method 25A will be allowed as required to accommodate moisture levels in the emissions stream. G-P has the option of selecting an alternative test method. Appropriate modifications to Method 25A and/or selection of an alternative test method will be determined in consultation with, and approved by, EPA's Office of Air Quality, Planning and Standards, Emission Measurement Center (Mr. Gary McAlister). For both types of plants, Methods 1-4 must be used for stack gas flow rate and moisture content.

4. Testing must be conducted on emissions from all dryers at the facility (hot zones only for plywood dryers).

5. During any test, the plant shall be operated in such a way that each dryer is operating as closely as possible to its maximum design.

6. G-P will submit, as specified below, a pretest report and an emission test report.

B. Pretest Report Requirements

At least two weeks prior to any test that will be used for compliance determination purposes, G-P will submit a pretest report for that plant. Multiple plants may be included in one pretest report. EPA will review the pretest information and, in the event of any deficiencies or discrepancies in the test protocol, G-P will be notified prior to the scheduled test date. Submittal of this information will minimize the possibility of improper sampling or data collection procedures which could lead to inconclusive compliance determinations.

Any proposed modifications to any of these sampling or analytical procedures must be indicated in the pretest report information, including justification for the modifications, and for any material modifications, G-P must receive written approval from EPA prior to testing.

The pretest information to be submitted includes, at a minimum:

1. A brief description of the air pollution control equipment associated with the process, if any, including:
   a. Type of control device
   b. Operating parameters at maximum process conditions.

2. A description of the emission sampling equipment including a schematic diagram of the sampling train.

3. A sketch with dimensions indicating the flow of exhaust gases from the process, through the control equipment associated ductwork to the stack.

4. According to Method 1, 40 CFR 60:
   a. An elevation view of the dimensions of the stack configurations indicating the location of the sampling ports and distances to the nearest upstream and downstream flow interferences.
   b. A cross-sectional sketch of the stack at the sampling location with dimensions indicating the location of the sampling traverse points.

5. Estimated gas flow conditions at sampling location, including temperature, moisture content, velocity, and static pressure.

6. A description of the process and control equipment operating data to be collected during the sampling period. Include the maximum design dry furnish production rate for each dryer and the proposed dry

furnish production rate during testing. Also include the proposed feed stock composition for the test and compare this composition to past feed stock composition.

7. Copies of the field data sheet forms to be used during the tests.

8. Identification of the testing firm which will be performing the tests.

9. A description of the procedures for maintaining the integrity of the samples collected, including chain of custody and quality control procedures.

C. Emission Test Reporting Requirements

The emission test report shall contain all pertinent data concerning the test, including a description of the process and operating conditions under which the tests were conducted, the results of the test, and test procedures. Presented below is a suggested format containing required information.

1. Introduction & Summary
   - a. Identification, location, and dates of tests.
   - b. Summary of emissions data.
   - c. Name and affiliation of all persons participating in tests.

2. Dryer Operating Conditions During Testing
   - a. Description of, and records from, process parameters and control equipment parameters monitored during the tests.
   - b. Maximum process feed rate recorded during the tests.
   - c. Moisture content of the wood being processed into and out of the dryers.
   - d. Type of wood
     - i. % hard wood
     - ii. % soft wood
   - e. Dryer operating temperature and maximum design temperature
     - i. high and low dryer temperature in the last two years (or a lesser period if records are unavailable)
     - ii. temperature as heat supplied (i.e. temperature of steam if steam heated)
     - iii. inlet temperature of the dryer during the test (OSB dryers)
     - iv. outlet or exit temperature (OSB dryers)
     - v. zone temperature (plywood dryers)

f. Actual and design air flow rate
g. Type of fuel being used
   i. % wood
   ii. % waste oil and liquid resin waste
h. Total heat content in BTU/lb. (For direct-fired dryers)
i. Estimate of amount of wood processed by weight/hr
j. Size of the dryer
   i. length (OSB dryers)
   ii. diameter (OSB dryers)
   iii. number of dryer sections (plywood dryers)
k. Wood mixture data with moisture content (OSB dryers)
   i. % dried dead wood
   ii. % green wood
   iii. % chips & other

3. Sampling and analytical procedures
   a. Description of sampling train and field procedures.
   b. Description of recovery and analytical procedures.
   c. Sketch indicating sampling port locations relative to process, control equipment, upstream and downstream flow disturbances.
   d. Sketch or cross-sectional view of stack indicating traverse point locations.
   e. Copies of all field data collected during the test (including filter temperatures of testing device), including sampling data sheets and process operating logs.
   f. Copies of all analytical laboratory data, including analyzers' response factor determinations.
   g. Sampling equipment and laboratory calibration data.
   h. Copies of all chain of custody information.

4. Calculation and data reduction methods
   a. Description of computational methods, including equation format used to obtain final emissions results from field data.
   b. Sample calculations from at least one run of each type of test performed.

5. Test results and discussion
   a. Detailed tabulation of results including process operating conditions and gas flow conditions.
   b. Discussion of any divergences from normal sampling procedures or operating conditions which could have affected the test results.

SCHEDULE B

PRESS MODIFICATIONS COVERED BY THE CONSENT DECREE

1. Peterman, Alabama

December 1980 expansion of presses Nos. 1 and 2 from 36 to 40 openings.
1985 expansion of presses Nos. 1 and 2 from 40 to 42 openings.

2. Talladega, Alabama

1983 expansion of presses Nos. 1 and 2 from 36 openings to 42 openings.
1990 construction of press No. 3 with 42 openings.

3. Crossett, Arkansas

1986 installation of a new press.

4. Fordyce, Arkansas

1988 expansion of presses Nos. 1-3 from 24 to 30 openings and installation of press no. 4.

5. Hawthorne, Florida

1985 installation of a new press.
1987 expansion of the press from 24 to 30 openings.

6. Cedar Springs, Georgia

1982 modernization of the press and expansion of number of openings from 40 to 45.

7. Madison, Georgia

1983 expansion of presses nos. 1-3 from 30 to 33 openings.
1985 expansion of presses nos. 1-3 from 33 to 36 openings.

8. Monticello, Georgia

June 1985 expansion of the three presses from 30 openings to 34 openings.

9. Gloster, Mississippi

1981 expansion of press No. 3 from 24 openings to 30 openings.
1988 installation of the 30 opening No. 4 press.

10. Taylorsville, Mississippi

1986 installation of plywood press No. 4.
1989 expansion of plywood presses Nos. 1-4 from 30 openings to 36.

11. Dudley, North Carolina

1987 expansion of the presses from 40 openings to 42.

12. Whiteville, North Carolina

1981 installation of a 30 opening press.
1986 expansion of presses Nos. 1-3 from 30 openings to 32.

13. Prosperity, South Carolina

1983 Georgia-Pacific installation of a 30 opening press.
1992 replacement of the existing 34 opening press no. 2 with a new 40 opening press.
1981 expansion of press No. 1 from 36 openings to 40.
1989 expansion of press No. 2 from 30 openings to 34.

14. Russellville, South Carolina

1984 installation of a 30 opening plywood press.
1987 expansion of plywood presses Nos. 1-3 from 24 openings to 30.

15. Emporia, Virginia

1983 installation of a new 40 opening press.
1987 expansion of presses numbers one and two from 30 to 32 openings each.

SCHEDULE C

Peterman, Alabama (Plywood facility)

Late 1980's Resin/glue reformulation

12/86 Powered roller bars were installed on both lathes.

8/87 SCR lathe drives were installed on both lathes.

12/88 One core drive was installed on the No. 2 lathe to enable the lathe to peel cores down to a smaller diameter.

11/90 Auto gap controls were installed on both lathes.

12/90 Laser scanners were installed on both lathes.

1/93 The boiler collector tubes were replaced with like-kind tubes.

11/82 Metal covers were installed on each vat to reduce heat loss from the vat water.

11/82 The worn out vat heater exchanger and pipes were replaced on all 6 vats with stainless steel units.

11/83 COE XY lathe chargers and back-up rolls were installed on both lathes.

9/84 Super Sync Positrol Systems were installed on both lathes.

7/86 One core drive was installed on the No. 1 lathe.

7/90 Delta t dryer controls #1, #2, #3 dryers

7/90 Upgrade moisture detectors #1, #2, #3 dryers

12/86 Upgrade moisture detectors #1 & #2 dryers

5/79 Skoog patcher w/ strip & patch saw

11/85 Modify #1 & #2 presses - add 2 openings each

8/80 Modify #1 & #2 presses - add 4 openings each

6/89 Add single head sander, t&g & siding machine

5/83 Center cut fishtail saw

8/92 Waster sheet saw

6/89 Skoog machine

9/83 Skoog machine

12/78 T & G machine

Talladega, Alabama (Plywood facility)

Late 1980's Resin/glue reformulation

11/92 Installed baghouse

1986 Rewired three dryers. Installed Texas Instruments PLCs on three dryers.

1989 Replaced Ward moisture detectors on three dryers with Delta T dryer temperature controls and Elliott Bay Cypress moisture detectors.

1990 Replaced press pneumatic temperature controllers with Texas Instrument Solid State RTD-style temperature probes.

1987 Reskinned No. 1 dryer.

1987 Replaced 3-row heater coils with 5-row heater coils.

1989 Rebuilt No. 2 dryer.

1984 Upgraded vat water system.

1984 Installed 8' log vat.

1987 Installed heat exchanger on log vat holding tank.

1988 Installed new log vat.

1992 Replaced heat exchangers in 3 vats.

1982 Replaced charger on No. 1 lathe with XY charger.

1983 Installed two backup rolls on lathes.

1983 Installed XY charger on lathe No. 2.

1984 Replaced tipple tray, clipper table and unloader drives.

1986 Installed two powered roller nose bars on lathes.

1988 Replaced lathe chargers.

1989 Changed laser scanners on lathes.

1990 Installed auto gap controls on lathes.

7/88 Boiler soot blower

5/86 Lilly pad chipper

10/80 Veneer dryer computer

10/79 #1 & #2 Press conversions - 30 to 36 openings

5/89 Upgrade dryer controls

5/78 10 Section dryer

12/88 Add 4 Sections #3 Dryer

11/78 Veneer dryer computer

11/90 42 Opening Press

7/83 #1 & #2 Press Conversion - 36 TO 42 Openings

4/87 Single head sander on specialty machine

5/82 Sander & specialty machine w/ bagfilter

9/84 Core saw green end

12/86 Boiler scrubber ash system

5/79 Condensate traps - dryers #1 & #2

5/79 Condensate traps - dryer #3

Crossett, Arkansas (Plywood facility)

Late 1980's Resin/glue reformulation

8/28/81 Began use of natural gas or No. 2 fuel oil as boiler fuel during start-up or emergency conditions as permitted by State.

2/4/83 Modified sanderdust system including elimination of old baghouse at 9-A boiler and replacement of the Carothers secondary baghouse filter with new MAC 120 MWP 140 primary bag filter.

5/16/89 Installed new six-head sander in plant No. 2 including installation of new fabric filter equipment.

1986 Replaced existing relay controls with Texas Instrument PLCs on dryers 1 through 7.

1989 Installed Allen Bradley PLCs on presses 1 through 7.

1989 Replaced existing moisture detectors and dryer tenders on 8 dryers with Elliott Bay Cypress detectors.

1989 Replaced Texas Instrument PLC controllers on dryers No. 7 and 8 with Allen Bradley PLCs.

1992 Replaced Texas Instrument PLC on dryer No. 4 with Allen Bradley PLC.

1992-93 Replaced existing temperature controllers on all 7 presses with Honeywell electronic controllers.

1993 Replaced Texas Instrument PLC controllers on dryers No. 1 and 6 with Allen Bradley PLCs.

1994 Replaced Texas Instrument PLC on dryer No. 2 and Allen Bradley PLC.

1984 Replaced condensate system on boilers.

1985 Upgraded boiler feedwater system.

1986 Installed economizers on boilers.

1987 Replaced char separators for ash handling system with rotary sand/char separators.

1988 Installed boiler vacuum breaker.

1988 Changed boiler air flow system.

1994 Replaced existing screw conveyer and ash box system with ash sluice system.

1980-82 Replaced dryer panels on all 7 dryers; Replaced existing steam coils with larger coils.

1980 Replaced press rams.

1986 Replaced press platens.

1990 Installed press scrapers.

1986 Installed two new log vats.

1994 Installed 10' log vat.

1980 Changed lathe spindle drives and veneer tray drives.

1980 Completed green end modernization including replacement of lathe clippers and installation of new strip accumulator.

1981 Installed XY charger on No. 3 lathe.

1983 Installed Morvue scanners.

1983 Installed backup rolls and XY chargers on lathes Nos. 1 and 2.

1983 Installed backup rolls on lathes Nos. 3 and 4.

1984 Installed high speed spindles on lathe No. 3.

1985 Replaced lathe carriage.

1987 Installed 4 power nose bars.

1990 Installed autogap controls on all 5 lathes.

1994 Lathe tray conversions on lathes 1, 2, 3 and 4.

6/78 Convert #1, #2, #3 presses (PL#1) 24 to 30 openings

6/79 Convert #4, #5, #6 presses (PL#2) 24 TO 30 openings

6/79 Replace sander, plant #1

6/80 Replace specialty saw w/ sander, plant #2

12/81 Installed (2) 150,000 lbs/hr wood-fired boilers

6/83 Replace exist cyclone/bagfilter on sanderdust fuel system

6/84 Two (2) log vats

6/85 Two (2) log vats w/ vat water holding system

6/85 Repl specialty saw w/ sander, bagfilter, plant #1

6/86 Installed 9/10 ft panel line incl: lathe,

6/86 16-section veneer dryer, 30-opening press,

6/86 Specialty saw w/ sander, skinner saw, patchline,

6/86 Cyclone, bagfilter

6/86 Replaced existing sander multicyclone w/ bagfilter

6/87 Two (2) log vats

6/89 Delta t controls, (8) veneer dryers

3/90 Sander w/ bagfilter, plant #2

6/90 Planer shavings truck bin w/ cyclone

3/91 Replace #1 & #2 boiler scrubbers

12/92 Replace #1 & #2 boiler dust collector tubes

Crossett, Arkansas (Studmill)

1990 Addition of planer shavings truck bin and cyclone (SN-C25).

1994 Studmill air application update with identified modifications.

Fordyce, AR (hardwood sawmill)

1/90 Boiler installation

1989 lathe installation

1990 Installation of green lumber pre-dryer.

Fordyce, AR (Plywood facility)

Late 1980's Resin/glue reformulation

10/81 State granted approval to allow use of natural gas or #2 fuel oil as boiler fuel in the two wood-fired boilers during start-up and emergency conditions.

11/82 Replaced all existing boilers with a single woodwaste boiler and installed a high efficiency cyclone and collector.

9/84 Installed tongue and groove machine.

10/90 Permitted a Polutrol VHE 20 pack multicyclone and high efficiency cyclone instead of a baghouse in conjunction with the 1974 woodwaste boiler installation.

12/29/90 Permit update with specific reference to earlier modifications:

1977 - Changed pneumatic conveying system from 11 to 6 systems.

6/77 - Installed dry waste systems Nos. 1 and 2, modified and relocated dry waste system No. 3.

1980 Installed Ward moisture detectors on three dryers.

1980 Replaced original relay systems on three presses with Allen Bradley PLCs.

1987 Installed Texas Instrument processor on three dryers.

1989 Replaced Ward moisture detectors on three dryers with Elliott Bay Cypress detectors.

1989 Installed Delta Ts on three dryers.

1989 Installed Texas Instrument PLC on No. 4 press.

1983 Replaced ID fan and housing for wood fired boiler.

1988 Replaced incline fuel feed chain conveyors.

1988 Installed soot blower.

1980 Installed patch line.

1983 Removed muffin monsters from 5 log vats.

1985 Installed vat water storage tank with heat exchange.

1987 Updated vat caustic treatment system.

1981 Installed XY chargers on No. 1 lathe.

1983 Installed XY charger system on No. 2 lathe.

1984 &1985
Installed synchronization control packages on lathes Nos. 1 & 2.

1985 Removed No. 3 lathe.

1985 Installed high speed spindles on No. 1 lathe.

1986 Installed rotary clippers on Nos. 1 & 2 trays.

1987 Installed rotary trash gates on Nos. 1 & 2 tray systems.

Installed trays on Nos. 1 & 2 systems.

Installed powered roller nose bars on Nos. 1 & 2 lathes.

1988 Replaced drive on No. 2 lathe.

1989 Installed laser scanners on Nos. 1 & 2 lathes.

1990 Installed auto gap controls on Nos. 1 & 2 lathes.

Conversion from spray-on glue to foam glue.

6/87 Boiler ash recovery system

6/86 Rail car chip cyclone

6/80 patchline

6/87 installed 30 opening press

6/87 Convert #1, #2, & #3 presses - 24 to 30 openings

6/89 Skinner saw

6/85 Replace boiler scrubber

6/78 1 log vat

6/85 1 log vat

Martell, CA (Sawmill)

1979 Installed new Wellons woodwaste boiler.

1990 Wellons boiler (No. 5) converted from woodwaste to natural gas.

1991 Wellons flue gas circulating fan and damper replaced.

1993 Wellons boiler fan bearings replaced.

1994 Final removal of No. 1 and No. 2 Atlas boilers.

1988 Permit modification to allow use of almond shells as auxillary fuel.

1989 Planer mill cyclone replacement.

1992 Planer mill hog cyclone replacement.

1993 Railcar chip loading pneumatic conveyor modification.

1994 Coastal planer cyclone replacement.

1979 Wellons woodwaste-fired boiler was install.

Martell, CA (Particle Board)

6/90 Tower Project:
1 SCREEN AND ASSOC. CONVEYANCE
1 PRIMARY SCREEN
2 SECONDARY SCREENS
2 REFINERS
5 BAGFILTERS FOR CYCLONE DISCHARGES
1 FIRE DUMP SCREW
1 MAGNET FOR METAL REMOVAL
1 ACCEPTS SILO FOR SCREENED MATERIAL

Late 1980's	Resin/glue reformulation
1/14/77	Installed interconnect between #4 tall stack boiler and face dryer system.
1/31/77	Installed intermediate dryer baghouse.
4/5/77	Modified hammermill cyclone.
12/15/90	Installed new baghouse to handle particleboard core sawdust.
12/5/91	Replaced pneumatic system CP105 with CP105A and CP105B including 2 12,000 ACFM fans and 7' cyclones.
5/1/92	Installed waste sawdust disposal system including small feed bin and transfer screw added to existing boiler fuel feed system.
6/17/92	Began burning waste sawdust in No. 4 boiler as permitted by State.
9/16/92	Began using hydraulic fluids with the sawdust as fuel for the No. 4 boiler as permitted by State.
1/14/93	Modified intermediate dryer to remove inner tubes and convert dryer from triple to single pass.
2/11/93	Replaced intermediate dryer.
4/26/93	Began using diesel- soaked wood as fuel in No. 4 boiler auxillary feed system as permitted by State.

8/9/93 Replaced cyclones on both the core dryer and intermediate dryer exhausts.

6/86 Stack gas connection from No. 4 boiler installation to allow stack gas to flow directly to the face, core or intermediate dryers or through the ROEMMC burner.

1986 Bailey fan/firing rate controls installed on No. 4 boiler.

1986 Multiclone ash collector changed on No. 4 boiler.

1987 COE sanderdust burners installed on No. 4 boiler to replace 1 large sanderdust burner.

10/92 Auxillary feed screw installed on No. 4 boiler.

Mid 80's Original face and core dryer drums were replaced with like-kind drums because existing ones were worn out.

1995 Replaced existing core and intermediate dryer exhaust cyclones with 2 Fisher-Klosterman high efficiency cyclones

1995 Relocated existing Littleford blender and installed new IMAL blending system and eliminated all post-blending screw type conveyors and 2 convey blenders (project completed in 1995).

6/84 Roemec sanderdust burner & ash collector

12/80 Two finishing heads & bagfilter on panel sander

6/86 Board breaker

6/89 Board cooler

3/92 Log chipper

6/83 Three dryer fire abort chutes

6/92 Pre-dryer fire abort chute

6/84 Schutte grinder and cyclone

1/80 Converted press from 16 to 20 openings

6/80 Shelving rip & cross-cut saws

6/90 Rail car uploading screw

1980 New warehouse addition and shipping dock

Hawthorne, FL (Plywood facility)

Late 1980's Resin/glue reformulation

1995 Installed 7 additional platens to the No. 1 and 2 presses

11/85 Roller bars installed on No. 1 and 2 lathes to work in conjunction with the core drive

12/85 New tray systems installed on both lathes and new clipper installed on No. 2 lathe

Plant was originally constructed in 1979

1990 Existing Ward moisture detectors were replaced on No. 1 and 2 dryers with Elliott Bay Cypress moisture detectors.

1992 Existing Ward moisture detectors were replaced on No. 3 dryer with Elliott Bay Cross Tipple moisture detector.

3/92 Existing Ward dryer controllers were replaced with an in-house design based on Allen Bradley 5/30 moisture control systems.

Late 86/Early '87
Additional repairs made to boiler including replacing the bull nose tubes at the first baffle wall, replacing the kicking tiles on the back pass of the boiler, installing a retractable soot blower at the boiler gas outlet, installing clinker chill blocks at both side, installing a retractable soot blower at the boiler gas outlet, installing clinker chill blocks at both side walls at the grate area, attaching tube shields to the exposed tubes in the ash box, replacing the second Ericz

classifier
with 2 Detroit rotary classifiers.

7/93 Series of additional repairs and improvements made to the boiler including installation of a front overfire air system, a manual damper, installation of 4 screw conveyors for fly ash removal, replacement of the existing pump, PLC controls and replacement of miscellaneous electrical parts.

6/94 Fly ash hopper was insulated and additional screw conveyor installed.Replaced the existing venturi scrubber with an electrostatic precipitator (project completed in 1995).

10/83 COE back-up rolls installed on both lathes.

6/84 New COE core drive installed on No. 1 lathe.

9/84 Modification to the back-up roll on No. 2 lathe.

12/85 Peerless bins

9/86 Two Super Sync updates installed onlathes

3/88 Core drive installed on No.2 lathe

7/82 Boiler

3/92 Automatic dryer controllers

7/82 Boiler multiclone / scrubber

7/82 Sander cyclone/bag filter

7/82 Dry waste cyclone & veneer waste cyclone

7/82 3 dryers (24 section, 20 section & 12 section)

7/82 Flyash system

7/82 2 skoog patchers

4/85 press #3, 24 opening

7/82 2 40 opening presses

4/87 6 additional press openings - press #3

5/85 Ramp for loading mulch

7/82 Panel sander

2/88 Single head sander on t & g machine

7/82 Center cut saw

7/82 Center cut fishtail saw

7/82 Fishtail saw

7/82 Saw line

7/82 Specialty saw

12/86 Boiler scrubber replacement

10/89 Skoog patcher

10/84 Skoog patcher

7/82 T & G machine

7/82 6 vats

Cedar Springs, GA Plywood

Late 1980's **Resin/glue** reformulation

1980 Replacement of Mann Russell moisture detectors with Ward Moisture Logic 220 C Detectors on dryers.

1982 Replaced press relay system with Allen Bradley PLC.

1988 Replaced Ward Moisture detectors with Elliott Bay Cypress moisture detectors on dryers.

1988 Installed Delta T dryer controls.

1982 Replaced boiler control system.

1986 Installed new fuel feeder drives on two boilers.

1988 Installed boiler fuel mixing system.

1990 Repair/rebuild of boiler.

1991 Boiler upgrade.

1985 Installed press temperature monitoring system.

1982 Log vat modification - water recirculation and heating system.

1985 Rebuild of vat water cleaning system to a fine mesh screen.

1988 Installed 3 new vats.

1989 Replaced 4 vats with 3 new ones.

1992 Heat exchangers installed on vats.

1981 Lathe carriage drive replaced with digital controlled DC drive.

1981 Installed spindle conversion kit and rotary knife veneer cutter.

1982 Solid state drives and a logic control system and an XY charger installed on lathe.

1982 Tray system changed.

1983 Replaced lathe carriage drive with digital carriage/back-up roll drive system.

1986 Installed powered roller nose bar.

1987 Installed powered core drive system.

1989 Installed COE digital carriage drive system.

6/79 Boiler multiclone replacement (2)

6/80 Debarker cyclone replacement

12/82 Modernize veneer line

12/91 Veneer patch equipment

7/82 Press modernized&converted from 20 to 45 openings

1991 Boiler modifications

1988 Delta t dryer controls

Madison, GA Plywood

Late 1980's Resin/glue reformulation

Plant was originally constructed in September 1978.

5/7/85 Installed new Carter Day baghouse including installation of a pressure (vacuum) indicator.

1983 The existing Ward moisture logic Model 220C moisture detectors on the 24-section and 20-section dryers were replaced with Wagner 1375 moisture detectors.

1985 The original Westinghouse numerologic press relay systems were replaced with Allen Bradley 2/30 PLCs.

1987 Allen Bradley 2/15 dryer PLCs were installed.

1993 The dryer tenders were replaced on the 24-section and 20-section dryers with the more advanced design found in the Mike Lloyd temperature differential moisture control system.

3/86 A venturi scrubber was replaced with a new scrubber.

1992 In-house dryer tenders were installed on the 24-section dryer, the 20-section dryer and the 16-section dryer.

1993 Installation of Delta T dryer controls on 24-section, 20-section and 16-section dryers.

1985 Replacement of moisture detector on the 16-section dryer.

6/90 New temperature and pressure control equipment was installed on press No. 1.

1/91 New temperature and pressure control equipment was installed on press No. 2.

5/91 New temperature and pressure control equipment was installed on press No. 3.

5/91 A recorder/controller system was installed on press No. 3.

Installed Grecon spark suppression system on sander system (project completed in 1995).

Installed a core drive on No. 2 lathe (project completed in 1995).

1985 Installation of hold back gates on the vat feed.

1985 Infeed chutes extended in the vat infeed.

2/88 Muffin monsters installed on vats.

2/90 Vat infeed was outfitted.

11/92 Vat outfeeds outfitted.

11/82 Hydraulic positioning cylinders installed all 3 lathe carriages.

Early '88 Three premier lathes replaced with 2 COE lathes.

1992 Installation of a small log lathe.

11/93 A lathe retrofit completed.

11/93 Core drives and XY chargers installed on No. 1 lathe.

1994 No. 1 lathe updated by installation of new probes and PLC controls.

1992 Vat outfeed.

1988 COE lathe replacement.

6/84 Replaced sander, bagfilter

6/88 Sander/specialty saw bagfilter

6/79 200,000 pph woodwaste boiler

6/88	Sanderdust burner @ boiler
6/86	Replaced 96" chipper
6/79	96" logchipper
6/87	Replaced rechipper
6/92	Upgrade dryer controls, 24&20 sect. Veneer dryers
6/93	Upgrade dryer controls, 16 section veneer dryer
6/91	Upgrade press temperature controllers
6/79	Boiler multiclone / scrubber
6/79	Planer shavings cyclone
6/79	Dry waste system (3 cyclones)
6/79	Green chip system with 2 cyclones
6/87	Added rechipper cyclone
6/86	Replaced drum debarker
6/79	Log deck
6/79	10 section veneer dryer
6/79	16 section veneer dryer
6/79	20 section veneer dryer
6/79	24 section veneer dryer
6/83	Microwave re-dryer
6/79	Sander bag filter
6/88	Log vat heat exchangers
6/79	30" dry hog

6/79 42" dry hog

6/79 Dry planer hog

6/87 Removed planer hog and cyclone

6/79 Chip-n-saw machine

6/79 Stud machine

6/79 Planer mill

6/87 Removed planer mill

6/89 Upgrade 10&16 sect. Veneer dryers moisture meters

6/88 Upgrade 20&24 sect. Veneer dryers moisture meters

6/88 4 veneer patchers w/ patch & strip saws

6/83 #1, #2, #3 press conversion - 30 to 33 openings

6/85 #1, #2, #3 press conversion - 33 to 36 openings

6/79 3 30-opening presses

6/79 Finishing sander

6/79 3 centercut fishtail saws

6/87 Removed chip-n-saw & stud machine

6/88 Core saw for end cut fishtails

6/79 Equalizer saw

6/88 Removed 2 center cut fish tail saws

6/88 Sander/specialty saw

6/79 Skinner saw

6/92 Boiler scrubber replacement

6/90 Ash handling system

6/79 Six (6) log vats

2/85 A microwave radio-frequency redryer installed

Monticello, GA Plywood

Late 1980's Resin/glue reformulation

1/18/78 Installed pneumatic relay conveying system for particleboard sanding operation and replaced bag filter with cyclone collector.

5/26/77 Installed pneumatic conveying system to handle hog plywood trimmings.

10/1/78 Installed wet scrubber on boiler.

7/5/78 Installed pneumatic sanderdust relay conveying system from plywood plant sander collector and from panelboard plant.

9/7/88 Installed monitoring system on the scrubbers.

1981 In-house controls added to dryers to form a crude hardwire logic dryer tender.

1985 Wagner 1375 moisture detectors installed to replace Mann Russell moisture detectors.

1988 Superior PMI relay system for the presses was replaced with an Allen Bradley 2/30 PLC

1989 Wagner moisture detectors replaced with Elliott Bay Cypress moisture detectors.

10/80 Heat exchangers installed.

12/88 PLC controls to replace obsolete controls.

Mid '94 Log vat spraying system installed.

8/82 XY chargers installed on No. 1 and 2 lathes.

11/83 New backup rolls installed.

Early '86 New clippers, trays and diverters.

5/87 New roller bars installed.

9/87 New SCR drives installed.

6/88 Backup rolls were replaced.

12/89 Auto gap controls installed

6/91 Boiler ash system upgrade

2/85 NSPS wood-fired boiler w/ multicyclone/scrubber

6/86 Dryer computer controls

6/87 Dry waste cyclone replacement

6/85 Replaced fuel house sanderdust cyclone

6/87 Sanderdust cyclone replacement

6/81 Installed r.f. dryer

6/85 Converted #1, #2, #3 presses from 30 to 34 openings

6/86 One (1) log vat

6/88 Dry waste fuel house pneumatic system w/ cyclone

1978 Coe veneer dryer put in service

11/85 2355.5 mmbtu boiler into service

Monticello, Georgia (Studmill)

1977 Modification and relocation of green sawdust pneumatic conveyor (CP832 Relay) to allow discharge of material to plywood boiler fuelhouse (Pt. #301).

1977 Installation of green sawdust pneumatic conveyor (Pt. #308).

1995 Replacement of existing planer mill pneumatic conveyor and two cyclones with new pneumatic system and one high efficiency cyclone.

Monticello, Georgia (Panelboard)

1988 Rotary dryer replacement

1988 Konus burner replacement.

1993 Dryer blower replacement.

1989 Spare 65 mm press roll purchase.

1994 Installed thin MDF line (projected completed in 1995).

1977 Baghouse for panelboard sander.

1977 Line #1 blender drop-out system.

1977 Line #2 blender drop-out system.

1977 Removal of aerodyne collector from dryer system.

1978 Installation of pneumatic conveying systems #115, 116, 117; modification of system 106.

1993 Hood installation on groove spray system of two finishing lines.

Vienna, GA Particleboard

Late 1980's Resin/glue reformulation

2/25/77 Installed 2 baghouses.

6/13/77 Installed sanderdust pneumatic conveying systems.

1/20/82 Installed hammermill at the trim saw line, new pneumatic conveying system, CD-509 to transport the milled trim to the sanderdust storage bin, new 42"

cyclone for material collection and new cyclone air exhaust connection to existing inlet into Carter Day bag filter.

10/3/83 Modified material storage system (installation of a "Y" in existing 505-B pneumatic conveying system).

10/14/83 Installed new cyclone (CP-505C) and associated sawdust handling system.

12/4/86 Installed material classification system and related material handling equipment, and a new grit and fines removal system.

7/15/87 Modified existing pneumatic conveying system CP-509 including installation of diverter gate and high efficiency cyclone.

Installed new IMAL blenders and 2 high efficiency dryer outlet cyclones to replace existing cyclones (project completed in 1995).

1993 Blenders installed

5/80 Dust burner for #1 boiler

5/80 Dust burner for dryer

11/86 Mcconnell wood burner for face dryer

12/90 2 cyclones-dust system/forming station

10/91 Cyclone pipe work w/ cyclone

10/87 Dust suppression system

11/88 Dust suppression syst-time saver sander

12/90 Hammermill to reclaim wood waste

7/92 Core refiner

9/89 Core refiner

12/90 Face refiner

5/88 Time saver sander

Warm Springs, GA Plywood

Late 1980's Resin/glue reformulation

1980-83 The vat steam plates in vats 1-6 were replaced with heat exchangers.

1980-84 A bulk liquid caustic system was added.

6/84 Metal covers were installed on each vat.

1989 The muffin monsters were removed from vats No. 7 through No. 10.

12/94 The existing pneumatic Foxboro temperature controllers were replaced with electronic controllers.

3/82 Morvue clipper scanners were installed to replace the existing obsolete Tech-Serv clipper scanners.

12/82 COE XY chargers were added to both lathes. The existing obsolete relay control for the lathe and tray system was replaced with a PLC.

8/83 Back-up rolls were installed on both lathes.

7/84 The existing GE tipple and tray drives were replaced with a new Redco Super-Sync drive.

6/86 The existing Elliott Bay clippers were replaced with Durand rotary clippers to improve the clipping accuracy.

6/86 Power roller nose bars were installed on both lathes.

8/86 Strip trays were added.

1986-87 The existing lathe drives were replaced with solid state drives.

6/87 The single bin stackers were replaced with dual bin Durand stackers.

Late '87 The spaces between the lathe trays were plated.

10/87 The lathe back-up rolls were replaced with core drives.

11/87 Both lathe spindle systems were replaced with 5-1/2 inch and 3 inch dual step down systems.

8/90 & 10/90 Auto-gap controls with temperature compensation were added to lathes No. 1 and No. 2.

Late '90 The existing charger reporting terminals and printers were replaced with a single terminal and printer shared by both lathes. At the same time, the obsolete XY charger positioner controls on the lathe were replaced with new controls.

1/95 A clipping trash gate was added to lathe No. 1.

1983 Replaced original press relay systems on No. 1 & 2 presses with Allen Bradley PLCs.

1987-88 Replaced existing moisture detectors on 3 dryers with Elliott Bay Cross moisture detectors.

1992 Installed Allen Bradley PLCs on Nos. 2 & 3 dryers.

1992 Replaced starter on presses with new motor control centers.

1993 Replaced existing Allen Bradley PLCs with new Allen Bradley 5/30 PLC controllers.

1994 Replaced Foxboro pneumatic temperature controller on No. 2 press with Allen Bradley Panel View 2711 panel.

1985 Removed grate blowing system from boiler.

1988 Replaced boiler tubes.

1989 Replaced pneumatic controls for boiler control panel.

1989 Changed sheaves on boiler fan.

1990 Changed ID fan on boiler.

1993 Installed automatic blowdown system.

1993 Repaired boiler.

1994 Modified firebox.

1986 Replaced dryer coils on No. 3 dryer.

1987 Replaced dryer coils on No. 2 dryer.

1993 Changed 30 hp DC drive on No. 3 main drive on dryers to 30 hp AC drive.

1994 Installed condensate return system on dryers.

3/28/77 Installed pneumatic conveying system to handle hogged plywood trimmings.

11/29/77 Modified existing wet scrubber on wood-fired boiler and converted spray-type scrubber to venturi-type scrubber.

6/79 Convert #1 & #2 presses from 36 to 40 openings

6/85 Convert #1 & #2 presses from 40 to 42 openings

6/79 Scrubbers

6/83 2 log vats

6/88 2 log vats

3/78 New dryer (no. 1) was installed

6/79 Boiler w/ scrubber installed

Woodland, ME OSB

1987 Conversion from Waferboard to OSB

1995 2 dryer drums and 2 burners replaced

1982 Installation of log and panel handling systems.

1984 Installation of flaker and screens.

1989-90 Installation of bins and hot ponds.

1986 Installation of stack gas economizer.

1988 Press platens modification.

1988 Dryer drum replacement.

1985 Wood fires storage bin vent filter and replacement of bag filter for fugitive dust.

1980 Construction of facility

11/82 Three (3) bag filters on pneumatics

3/87 One (1) bag filter on bin vent

9/88 One (1) ESP on flake dryers

Woodland, Maine (Chip-N-Saw)

1979 Permit modification to delete opacity monitor requirement.

1995 Log line modifications.

1995 Planned green end upgrades.

Gloster, MS Plywood

1/77 Installed woodwaste boilers and cyclones.

9/79 Installed green chip cyclone.

1/82 Enlarged the blow-pipe.

11/81 XY charger installed on No. 2 lathe.

7/83 XY charger and high speed spindles installed on No. 1 lathe.

9/83 Backup rolls installed on both No. 1 and 2 lathes.

1/84 4' lathe removed from service.

9/86 A powered roller nose bar installed on No. 1 and 2 lathes.

4/89 Laser scanner conversions made on No. 1 and 2 lathes.

12/90 Auto gap control installed on No. 2 lathe.

2/91 Auto gap control installed on No. 1 lathe.

10/78 Chip truck bin

6/89 Dryer temperature & moisture controls

10/78 Chip truck bin cyclone

10/92 Sanderdust high-efficiency cyclone

6/86 High moisture glue system

6/88 30 opening hot press

6/80 Convert #1 & #2 presses from 24 to 30 openings

6/81 Convert #3 press from 24 to 30 opening

6/84 Center cut fishtail saw

5/82 Specialty saw

6/84 2 eight foot log vats

Grenada, MS OSB

1987 Modified pneumatic conveyor.

1991-92 Dryer replacement of drums as like kind replacements.

1989-90 Press loader cage and loader arm.

Installed dedust system (project completed in 1995).

1985 Two new pneumatic conveying systems.

1985 Construction of facility

11/88 One (1) suspension burner for thermal oil heat exchanges with cyclone collector

8/90 One (1) paint spray booth

4/91 One (1) bag filter for pneumatic conveying system

9/92 One (1) ESP installed on flake dryers

Louisville, MS Plywood

Late 1980's Resin/glue reformulation.

9/77 Installed scrubber and fly ash reinjection system.

6/20/79 Installed multicyclones and scrubber.

1986 Installed Allen Bradley PLCs on dryers.

1989 Replaced original press relay systems with Allen Bradley PLCs.

1979 Installed boiler.

1986 Replaced continuous blowdown system on boiler.

1989 Installed new exhaust scrubber and ID fan on boiler.

1992 Installed larger ID fan on boiler.

1989 Replaced loader and unloader on presses 2 & 3.

Replaced the core chipper and lilypad chipper (project completed in 1995).

1980 Changed lathe tray system.

1981 Changed Unico lathe drive system and COE XY charger on No. 1 lathe.

1983 Installed two back-up rolls on lathes.

1984 Replaced manual stacker on No. 1 lathe tray system with double stacker.

1985 Installed XY charger and high speed spindles on No. 2 lathe

1986 Installed two roller nose bars on lathes.

1986 Changed rotary clippers.

1990 Converted laser scanners on two lathes and installed autogap controls on lathes 1 & 2.

5/79 Boiler installed

6/88 Dryer controls/moisture detectors

11/92 General plant cyclone - replace

5/82 Skinner saw cyclone

10/84 T&G/specialty saw cyclone

6/87 #3 boiler economizer

6/89 Dry hog at skinner saw

6/88 30 opening hot press

6/78 Converted 24 opening to 30 opening press

6/79 Converter 24 opening to 30 opening press

6/80 Converted 24 opening to 30 opening press

6/84 Center cut fishtail saw

6/86 Plug saw

5/82 Skinner saw

10/84 Specialty saw

6/89 Replaced #3 boiler scrubber

6/88 Added two log vats

Louisville, MS Particleboard

Late 1980's Resin/glue reformulation.

1994 Replaced dryer drums on core and face dryers and replaced cyclones on core and face dryers with high efficiency cyclones

5/84 Bauer Refiner

1/93 Bauer outfeed system to dryer

1/83 Blower system for sander

12/84 Wood burner

10/90 Former dust control

8/80 Board cooler

12/78 Dryer area dust control system w/ cyclone

1/93 Sander dust cyclone

6/87 Dryer drum replacement

6/84 Cut-up line

6/84 Mac system (removed 7/91)

12/85 Measurex monitoring system

1/93 Pallman outfeed to dryer system

5/84 High pressure pneumatic system w/ bagfilter

1/93 Resin additive system installed

12/89 Two head sander air system

12/89 2 heads added to sander w/ air system

1/83 Sander system modification

11/87 Superfines system with baghouse

2/88 Dust vacuum system west side

Oxford, MS Paticleboard

Late 1980's Resin/glue reformulation

10/17/77 Installed high efficiency pneumatic cyclones for fugitive dust collection at dryer system conveyor belts.

3/16/78 Removed cyclonic-like skimmer from the dryer system.

Replaced the boiler dust collector and installed high efficiency dryer cyclones to replace existing conventional dryer cyclones (project completed in 1994).

6/86 TM (face) blender upgrade

6/84 CM (core) blender upgrade

6/89 TM (face) overs reflaker (#3 pallman), cyclone

6/86 Overs conveyor discharge system, cyclone x

7/78 #2 slat bed bed saw, #2 brd trim hog, cycl/bagfilter

6/86 Upgrade sanderdust storage, cyclone

6/90 Dry residuals truck dump

6/84 Board emission test room

6/80 Phase II boiler/dryer energy conservation

6/79 Phase I boiler/dryer energy conservation

6/84 #2 pallman flaker addition

6/86 Board thickness gauge

6/81 Furnace combustion air pre-heater

6/90 Edge glue (scarf) machine - underlayment

6/81 Press feed upgrade

6/79 Panel saw set-up revision

6/86 Face material formaldehyde scavenger system

6/80 Furnace fuel storage shed

6/81 Upgr fines pneumatic system (cycl/bagfilter/conv)

6/88 Core material formaldehyde scavenger system

6/79 Screen area fugitive dust system

Taylorsville, MS Particleboard

Late 1980's Resin/glue reformulation

4/90 Forming Clean Air System

9/92 Cyclone & Baghouse-Countertop/Multiscore/Bullnoze

12/85 Reject Material Baghouse

6/81 T&G Bagfilter

6/88 Bauer Feed Material Bins

6/88 Fine Material Feed Bin

6/85 Accuray Forming & Blending Control Syst.

6/79 Replaced Board Cooler

12/90 Bauer Cyclones

6/90 Modified Face Dryer Cyclone (Incl. W/ Bauer)

6/89 Enclosed Truck Dump

6/90 Added 2nd Hog

6/85 Installed 3rd Bauer Milling Machine

6/88 Installed 4th Bauer Milling Machine

6/92 Installed 5th Bauer Milling Machine

5/84 Bullnoze Shelving Machine

6/88 Bolster (Sticker) Machine

7/81 Sander Kimwood

6/84 Countertop Saw Line/Dust Rem. Equip Cyclone

6/86 Holzma Saw

6/86 Multiscore Saw

6/88 Screens

6/89 Enclosed Shavings Silos (3) (Incl w/ Bauer)

10/81 T & G Machine

8/3/77 Installed 4 cyclones.

6/9/89 Installed new 12' cyclone as part of "Face Material Cooling Project" and replaced Carter Day baghouse 72RJ48 with 72RJ96.

4/19/90 Installed air emissions control equipment on the COE 6-head sanderdust baghouse.

Installed 2 additional sander heads (project completed in 1995).

2/86 bauer mill no. 3

11/87 bauer mill no. 4

7/93 bauer mill no. 5

Taylorsville, MS Plywood

Late 1980's Resin/glue reformulation

10/86 Installed specialty machine including air emissions and pollution control equipment.

3/13/90 Replaced existing cyclone with fabric filter.

7/93 Replaced wet scrubber on Boiler No. 3 with electrostatic precipitator.

1982 Installed unloading equipment on all 4 dryers.

1982 Installed Texas Instruments PLC on three presses.

1988 Installed Elliott Bay Cypress moisture detectors on 4 dryers.

1990 Installed automated hardware on 3 of 4 presses.

1993 Replaced Texas instrument 550 PLC on four presses with four Texas Instruments 545 PLCs.

1994 Replaced Texas Instrument 525 PLC on four dryers with Texas Instrument 545 PLCs.

1980 Replaced ID fan on No. 1 boiler.

1994 Installed Hy-Hoe log lifters on vats.

1982 Installed XY chargers on lathes.

1984 Installed SCR drives on lathes.

1987 Installed high speed lathe spindles and nose bar on lathes.

1989 Laser scanner conversion on lathes.

1990 Installed roller nose bar and auto gap control on one of three lathes.

8/90 Replaced panel sander/bagfilter

9/89 Baghouse for the 2 head sander

8/86 Specialty saw bagfilter

12/79 Manual dryer dampers #4

8/89 Delta t controls on dryers 1,2,3 & 4

12/79 #4 veneer dryer

10/86 30 opening press

12/79 Convert press #1,2,3 from 24 to 30 openings

12/89 Convert press #1,2,3 from 30 to 36 openings

12/80 Boiler #1 scrubber

8/87 Boiler #3 scrubber replacement

12/87 1 log vat

12/89 Converted press #4 from 30 to 36 openings

4/78 Installed #3 wood fired boiler

Dudley, NC OSB

1980-82 Conversion from Comply to OSB.

1982-83 Installed Wet ESP.

1981 Installed cyclone collector in pneumatic conveying system.

1986 Installed diverter valve for green wood chip pneumatic conveying system.

1979 Installed 3 bag filters.

Original facility construction No.s 1 and 2 dryers installed
1982 No. 3 dryer installed

1993 Replaced drum

1994 Replaced no. 1 and 2 dryers

Dudley, NC Plywood

Late 1980's Resin/glue reformulation

Plant was originally constructed in 1978.

2/11/81 Installed cyclone collector on pneumatic conveying system.

1/17/86 Modified existing pneumatic conveying system including installation of diverter valve in pneumatic pipe to allow wood chips to be diverted from existing truck loading bin cyclone collector to the rail loading cyclone collector.

2/27/86 Installed air cleaning device consisting of transfer cyclone.

5/14/92 Installed cyclone on ply-trim operation.

1988 Installed Elliott Bay Cypress moisture detectors on three dryers.

1990 Replaced steam and pressure gauges on presses with Honeywell circular short recorders.

1992 Upgrade Allen Bradley PLCs on presses to newer model.

1986 Installed new clipper and tray system on lathe.

1986 Installed super sync system on lathe.

1988 Replaced existing lathe chargers on No. 1 lathe with new ones.

1989 Installed new autogap control.

1989 Installed new No. 2 lathe.

1990 Green end modernization with autogap controls on No. 1 lathe

1994 Installed core drive on No. 1 lathe.

1/80 Boiler ash system

1/80 Wood-fired boiler

1/80 Rechipper

1/80 Boiler multiclone / scrubber

1/80	Fishtail saw cyclone
6/86	Pine chip rail loading cyclone
1/80	Pine chip truck loading cyclone
1/80	Rechipper cyclone
1/80	Two ring nicholson debarker
3/89	18 section veneer dryer
1/80	16 section veneer dryer
1/80	24 section veneer dryer
12/90	Delta t dryer controls
4/86	12 section dryer
11/92	Pneumatic upgrade
11/92	Press fast close
6/87	#1, #2 press conversion - 40 to 42 opening each
1/80	Two (2) 40 opening presses
1/80	Plywood sander
1/80	Specialty saw single-head sander (system #3)
1/80	Single head sander on t & g machine
1/80	Fishtail saw
1/78	Glueline core saw
11/83	Glueline flying saw
1//80	Specialty saw (system #1)
1/80	Globe skinner saw sawline

4/89 Boiler scrubber replacement

1/80 Globe T&G siding machine

1995 Dryer modifications

12/89 #3 skoog machine

11/83 #2 skoog machine

1/80 #1 skoog machine, strip saw, radial arm saw

1/80 Dry fuel system (system #8)

1/80 Dry trim system (system #1)

1/80 Plywood sander dust system

1/80 Specialty/T&G sander system (system #3)

12/85 One (1) log vat

1/80 Four (4) log vats

1/89 Two (2) log vats

Dudley, North Carolina (Chip-N-Saw)

1977 Installation of pneumatic conveyor and 48" planer shavings cyclone at boiler fuel house.

1977 Installation of pneumatic conveyor and 84" chip cyclone at train bin.

1977 Installation of pneumatic conveyor and 48" planer shaving cyclone at planer shavings bin.

1977 Installation of pneumatic conveyor and 84" chip cyclone at truck loading bin.

1984 Installation of chip screening equipment and conversion of existing low pressure pneumatic system to high pressure system (Emission Pt. 42).

1991 Installed multicyclone collector on woodwaste fired boiler and cyclone collectors on the 58" and 66" chippers.

Whiteville, NC Plywood

1981 Installation of vat recycling system

1979 Installed multiclone and scrubber on wood-fired boiler.

1982 Replaced piping and repaired cyclone for ply-trim pneumatic conveyor (System #CP-605).

1983 Removed No. 2 oil-fired boiler from service.

1984 Modified pneumatic conveying systems for sander, specialty saw, and tongue and groove machine.

1993 Began use of waste oil as boiler fuel as permitted by State.

1981 Existing Mann Russell moisture detectors replaced with new Ward moisture detectors.

1982 Replacement of relay controls on 2 presses with a PLC system.

1983 Ward moisture detectors replaced with Wagner moisture detectors.

1985 Allen Bradley 2/15 PLCs installed on the dryers to replace the deteriorating relay control system.

1986 In-house PLC 2/15 controlled dryer tenders installed.

1986 Wagner moisture detectors replaced with Elliott Bay Cypress moisture detectors.

1993 Allen Bradley 5/20 dryer PLCs installed.

1993 Foxboro temperature controllers on Presses 2 and 3 replaced with Honeywell controllers.

1994 Press No. 2 PLCs (installed in 1982) replaced.

12/77 COE 14-section dryer put into service.

Late '90 Steam and condensate collection system restructured to accept kiln condensate from the kilns at the adjacent CNS facility.

Late '93 to mid '94 Series of boiler repairs undertaken to reduce particulate emissions. These changes involved repairs to the scrubber system.

12/88 Loaders/unloaders were replaced on the No. 1 and No. 2 presses with like-kind units.

1981 Vat water steam coils replaced with exterior steam heat exchanger with controls to maintain vat water temperature. The vat water recycling system built to recycle vat water in a closed treatment system.

1982 XY chargers installed on both lathes.

6/84 High speed spindles installed on the lathes.

1986-87 Series of steps taken to improve the green end operations. This included installation of 2 clippers and 4 tray systems. Two new roller bars installed during this time. In addition, 2 new lathe drives installed to reduce the amount of time to load each block.

12/89 Auto gap controls installed on the lathes.

1994 Two core drives installed on the lathes.

1981 Vat steam heat exchanger installation.

6/88 Boiler shoot blower

6/85 NSPS boiler, scrubber & ash system

6/85 NSPS boiler multiclone

6/86 High moisture glue system

6/81 Installed 30 opening hot press

4/86 Convert press #1,2,3 from 30 to 32 openings each

6/88 Installed old single head sander-specialty machine

6/86 Upgraded sander dust system

6/85 Replace board sander

6/88 Replaced single head sander & t&g machine

6/85 Single-head sander and T&G machine

6/84 One (1) log vat

6/88 One (1) log vat

Whiteville, North Carolina (Chip-N-Saw)

1981 Installation of chip screening equipment and 2 sawdust pneumatic conveyors.

1987 Installation of edge trim chipper and cyclone.

Holly Hill, SC MDF

1989 Replaced 7 silos with green chip and plytrim storage equipment.

1982 Installed dust burner.

Installed EP and heat exchanger on boiler (project completed in 1995) and replaced baghouses with 2 pneumatic filters (project completed in 1994).

1992 Installed pre-sander.

1978 Pendista formers and related pneumatics (replacement)

6/82 Coe sander 5' - no additional emission permit

8/84 Long bodied cyclones and air locks were added to the flash tube dryers

1982 A closed looped reject system with a pneumafil bag house and classic system air lock

1985 Rotex classifier, montgomery bag/blower and cyclone, raw material to refiner

12/87 Kmw, 8'x26' press (replacement), 1-46 refiner/dump cyclone, and two globe saw

systems/, pneumatic system (pneumafil bag house, surge bin, air lock, and feeder)

9/88 Fire in the silos caused some rearrangement of the pneumatic piping in the woodyard

8/92 Kimwood sander/pneumatic system 31,000 cfm (pneumatic feeder, blower)

12/94 Two westec double-pass flash-tube dryers installed

Holly Hill, South Carolina (Pine Sawmill)

1981-82 Band Mill refurbishment.

1983 Chip-N-Saw line installation.

1982 Shutdown of sawmill boiler - steam demand shifted to MDF boiler.

1986 Installation of lattice and cut-to-length equipment.

1989 Replacement of planers, planer mill cyclones.

1994 Installation of small log line.

Prosperity, SC CHIP-N-SAW

Early 1996 Shutdown of chip-n-saw boiler and use of plywood plants boiler

1987 Chip-N-Saw woodwaste boiler permit entry transferred from plywood plant permit to chip-n-saw permit.

1981 Green sawdust blowpipe installed at boiler.

1992 Permit modification to allow waste oil combustion in boiler.

3/87 60,000 BTU/HOUR Wood-waste fired boiler

Prosperity, SC Plywood

8/89 Installed exhaust diverter valve on existing plywood trim pneumatic conveyor to allow hog plywood trim to be diverted to the new railcar loading station.

4/14/92 Installed specialty saw and sanderline.

1981 Original hardwire relay logic control system on the 24-section dryer was replaced with an Allen Bradley 2/15 PLC.

1984 The original hardwire relay logic control system used to control loading and unloading on the 12-section dryer was replaced with an Allen Bradley 2/15 PLC.

1987 Original press hardwire relay logic control systems were replaced with Allen Bradley 2/30 PLCs.

1988 Original dryer hardwire relay logic speed control system for the 12-section dryer was replaced with an Allen Bradley 2/15 PLC and the moisture controls used to control veneer moisture content were also replaced.

1992 Rebuild of plant including installation of Allen Bradley 2/30 PLC on the rebuilt No. 1 press, installation of an Allen Bradley 2/30 PLC on the replacement No. 2 press which was larger than the original No. 2 and installation of Allen Bradley 5/20 PLCs on the rebuilt 24-section and 12-section dryers.

3/87 The 60,000 Btu/hr. CNS boiler, originally installed in 1973, was transferred from the plywood facility permit to permit for adjacent CNS facility.

3/88 Elliott Bay Cypress moisture detector systems were installed on both dryers to replace the existing Ward moisture detector systems.

6/89 The DC motor drives were changed to AC motor drives.

6/92 No. 1 press had to be rebuilt. During the process, the loading/unloading mechanism was changed from a mechanical "lug" activator system to an electronic quadrature encoder system and the mechanical variable pressure setting knob was replaced by an electronic proportional relief valve system controlled by an Allen Bradley PLC 2/30.

6/81 Expansion of No. 1 press.

Between7/80 & 1/83 3 muffin monsters were installed on the vats.

10/87 2 additional vats (double vat) were installed with external heat exchangers.
1/88 1 muffin monster installed on a vat.

1991 All muffin monsters were removed except for 1.

1981 A spindle conversion made on No. 1 lathe.

11/82 Back-up roll conversion made on No. 1 lathe to replace the existing back-up roll.

9/83 Computer program used to drive XY chargers changed to handle smaller blocks.

1/85 A powered roller bar installed on No. 1 lathe.

1/86 The Elliott Bay anvil clipper replaced with Durand rotary clipper with a strip tray installation.

2/86 The Morvue Infra-scan option for the Durand rotary clipper was added.

11/86 Lathe motor generator set replaced with SCR lathe drives.

6/88 The COE C4S back-up roll replaced with a Calvert back-up roll - 6 weeks later removed and original COE C4S reinstalled.

1989 A temperature compensating/heat sensor auto gap adjustment installed.

11/92 Lathe rebuilt due to fire.

12/94 Lathe carriage drive conversion completed.

1/95 High speed spindle conversion and core drive installation including replacing the PLC 2/30 with a PLC5.

12/85 High moisture adhesive

3/89 NSPS wood-fired boiler

6/92 Dryer speed/moisture computer controls

6/92 Dry waste rail cyclone replacement

10/78 Replaced dry waste bagfilter w/ high eff. Cyclone

6/92 Replaced dry waste high efficiency cyclone

9/92 Dry waste rail car loading system w/ cyclone

10/78 Replaced sanderdust bagfilter w/ multicyclone coll

12/86 Upgraded dryer steam coils 24 section dryer

9/89 Converted #2 press from 30 to 34 openings

6/83 Installed 30 opening #2 plywood press

6/81 Convert #1 press from 36 to 40 openings

5/85 Specialty saw

6/83 One (1) log vat

12/87 One (1) log vat

6/92 Superior 40-openings press #2 installed

Russellville, SC Particleboard

Late 1980's Resin/glue reformulation

1/24/77 Installed 1 Pneumafil Model 8.5 - 124 - 8 and 1 Pneumafil Model fabric filter for collecting sanderdust emission from existing pneumatic conveying systems.

7/18/84 Replaced existing pneumatic conveying system with system of slightly higher capacity including larger fan, blowpipe and cyclone.

Early '86 Replacement of sanderdust burner, wood fuel feed system and installation of replacement controls. Also installation of new baghouse.

Late '90 thru 6/91 Repairs to existing boiler - including repair to rear boiler walls, steam line and screw feeding system. Also variable speed control installed for ID fan and sanderdust bin drag chains and head roll re-positioned.

1993 Core and face dryer cyclones replaced with Fisher Klosterman high efficiency dual cyclones to replace outdated and worn equipment.

12/92 Sanderdust transfer system bagfilter

6/85 Replaced asm bagfilter

10/90 Sanderdust bin bagfilter

5/91 Former & de-dust bagfilter

8/85 Blending & forming line de-dust syst. W/ bagfilter

10/90 2 head pre-sander bagfilter

10/90 2 head pre-sander

12/81 Kimwood sander baghouse/cyclone

6/80 #3 bauer

12/86 Boiler bagfilter

4/87 Enlarged boiler bagfilter

5/91 Improved boiler fuel feed

12/86 Boiler sanderdust burner upgrade

5/91 Cp 211 dust collection system upgrade

6/88 Upgrade press control system

11/92 Dust pickup system, bin & scale

6/84 Replaced pallman refiner w/ bauer mill

6/79 Measurex forming line system

6/88 Fiber milling modification - #5 & #6 bauers

11/92 Former & de-dust bagfilter heaters

12/91 Former and de-dust cyclone, bagfilter

6/89 Quadra-beam moisture gauges @ blender

6/90 Quadra-beam moister gauges @ woodyard

8/90 Replaced planer mill pneumatic system

6/92 Scavenger resin system & 4 chamber system

6/92 Resin/scavenger tank & house

6/92 Mat compression roll

9/92 Sanderdust transfer system

6/88 Sander thickness gauge

6/91 Statistical process control system

3/88 Superfines system w/ bagfilter

Russellville, SC Plywood

Late 1980's Resin/glue reformulation

9/20/82 Began burning waste oil as a supplemental fuel source in wood-fired boiler as permitted by State.

3/17/93 Replaced dry waste cyclone.

1978 The existing moisture detectors had to be replaced on two of the dryers with new Ward "moisture logic" Model 220C detectors.

6/84 The facility replaced the relay controls on two presses with a PLC system.

1986 The Ward moisture detectors were replaced with new Elliott Bay Cypress moisture detectors.

1987 Allen Bradley 2/15 PLCs were installed on the three dryers to replace the deteriorating relay control system.

1988 In-house controls were added to the dryers to form a crude hardwire logic dryer tender which in effect was a programming step for the dryer PLCs installed in 1987.

1994 The dryer tenders were again replaced with the more advanced temperature control system.

9/77 The 16-section dryer was installed.

12/85 The original facility boiler underwent several changes to replace worn equipment and increase combustion efficiency. These replacements included installation of a new flash tank, new feed water gear and valving, new rotating element for the I/D fan and new blower.

5/86 The DA tank, where boiler water is conditioned, was replaced.

1989 The new boiler was repaired. These repairs included replacing the front ash disposal system and installing heat exchangers.

1/86 The existing press loader and unloader were replaced because the existing units were obsolete.

5/89 The power unit for the No. 1 press was replaced because the cost to repair the existing unit was higher than the cost of a new one.

12/81 A new log vat was installed.

12/85 Log vat heat exchangers were replaced in 3 vats.

1/88 Two new heat exchangers were installed on the vats to replace existing units which did not have the capacity to maintain desired temperatures.

Early '80 The No. 1 lathe was rewired and the drives on the No. 1 and No. 2 lathes were replaced due to poor condition.

9/80 The facility installed a COE lathe charger and associated hardware.

6/83 A new COE XY charger was installed. At the same time, the facility also installed 2 new back-up rolls to improve veneer recovery and reduce raw material cost.

8/85 Two Super Syncs were purchased for the lathes to improve log recovery.

1985 Two roller bars were installed to improve veneer recovery.

6/87 A new SCR lathe drive was installed.

12/86 One core and tray system were replaced.

6/87 Two roller bars were installed on the lathes.

1987 The obsolete Unico Super Sync system on the lathe was replaced.

2/88 A deck was installed in the tray system.

12/86 NSPS boiler ash system

12/86 NSPS boiler multicyclone, scrubber

8/92 Dry waste truck loading cyclone

12/86 Skoog veneer patchline w/ cyclone

12/81 Upgrade dry waste transport system

12/79 Chip truck loading bin

1/84 30 opening press for 9'/10' board

10/89 Removed 9'/10' board press from service

6/87 Convert press #1,2,3 from 24 to 30 openings

12/86 Single head sander at T&G machine

1/81 Time saver sander

6/84 2 log vats

12/85 Upgrade dry waste transport system

Emporia, VA Plywood

Late 1980's **Resin/glue** reformulation

7/93 Modified existing plywood production facility by relocating the truck loading bin, installing a negative pressure system to move the material to one drop-out point using a Carter Day or equivalent bag filter, and conveying the chips to the bin with a chain or belt.

1983 Installed PLC system on No. 2 press.

1984 Replaced original relay system with Allen Bradley PLC on No. 1 press.

1985 Replaced Mann Russell moisture detectors with Wagner types.

1986 Installed Allen Bradley PLCs on dryers.

1987 Replaced Wagner moisture detectors with Elliott Bay Cypress types on Nos. 2 and 3 dryers.

1992 Replaced Wagner moisture detector with Elliott Bay Cypress type on No. 1 dryer.

1994 Upgraded PLC systems on Presses 1, 2 and 3.

1987 Boiler repair.

1993 Replaced heat exchangers on boiler.

1994 Boiler fuel cyclone replaced with high efficiency cyclone.

1994 DA tank on boiler replaced with larger tank.

1980 Removable tarps installed on log vats.

1980 Installed heat exchangers on vats.

1985 Installed two roller bars on lathes.

1986 Added two rotary clippers and two roller nose bars on lathes.

1987 Replaced lathe drives.

1987 Installed new trays.

1988 Replaced lathe chargers.

1994 Installed core drives.

12/79 Installed dry waste truck loading bin

7/78 New wood-fired boiler

12/79 Dry waste truck loading cyclone

6/78 New boiler multicyclone, scrubber, ash system

11/78 14 section veneer dryer

2/86 Skoog veneer patcher

11/87 2 press openings a- press #1 & #2

10/83 40 opening press

12/86 Sander head on T&G machine

12/85 Flying saws (2)

10/83 Fishtail saw

10/83 Rough saw

5/88 Boiler scrubber upgrade

10/83 Skoog veneer patcher

10/83 2 log vats

Skippers, VA OSB

1986 Installed log and panel handling equipment.

1987 Installed thermal-oil burner.

1991 No. 3 dryer drum replaced.

1993 Dryer drums 1, 2 and 4 replaced.

1985 Construction of facility

1/89 One (1) wellons wood/bark fuel burner exhausting through existing multicyclones (for thermal oil heat exchangers) then exhausting through existing ESP

8/87 One (1) paint spray booth

South Boston, VA Particleboard

1995 Installed feed hopper and conveyors and modified the No. 2 TM dryer

3/30/77 Replaced existing cyclone with new Pneumafil bag filter.

3/30/77 Two phase construction of the N3A project:

Environmental portion and associated dryer modifications, flaker additions.

Modification to press forming line and addition of 1 flaker (including cyclone).

5/9/85 Installed baghouse off of existing cyclones.

10/2/85 Constructed laboratory and pilot plant. Equipment included: 1 electric particleboard dryer, 1 Rotex screen, 1 glue mixing station, 1 hydraulic hot press, 1 muffle furnace, sanding and sawing equipment and 1 bench hood.

6/27/88 As part of Phases I and II of the facility upgrade, added a screen and 2 small high pressure systems (1 CM and 1 TM).

9/22/88 Modified TM Pallman Air system and installed new TM sawdust system.

6/28/90 Added bags to existing baghouse which services the Globe Panel Saw and replaced existing dust pickup fan with new unit.

3/31/92 Converted split conveyor 06-19 into 2 conveyors.

4/20/92 Modified wood dust collection system including installation of new cyclone. Also enclosed screw conveyor from the new cyclone to existing storage silo and emergency dump system for the ADCE link.

5/7/92 Installed emergency replacement boiler for the existing Keeler 35,000 lb/hr. boiler.

1/28/93 Began testing dust suppression chemical as permitted by State.

4/2/93 Relocated a SLR saw as permitted by State.

4/2/93 Modified planer shavings system and removed an existing hammermill and screener.

SCHEDULE D

SUPPLEMENTAL ENVIRONMENTAL PROJECTS

I. General Conditions.--

A. G-P agrees to undertake the following supplemental environmental project(s) ("SEP(s)"), at an aggregate cost of $4.25 million in accordance with Section VIII, paragraph 50 of this Consent Decree. Each SEP described in Sections II, III and IV below includes a schedule for development and implementation. G-P agrees to report to EPA on a quarterly basis on the progress of its implementation of these SEPs in accordance with Section V, paragraph 45 (e) of this Consent Decree, including any information obtained by G-P during development or implementation of any of these SEPs which would materially affect the success of the SEP.

B. Under this Consent Decree, G-P shall enter into contracts with non-profit agencies to carry out certain SEPs described in Parts II through IV below. As part of such contracts with a non-profit agency, G-P shall require the non-profit agency to submit to G-P and to the United States a proposed work plan setting forth in detail schedules for implementing any such SEP, including dates for submission of all interim and final reports to G-P and the United States. G-P shall report to the United States upon learning that any non-profit agency will fail or has failed to meet the schedlule under its contract with G-P. The contracts between G-P and the non-profit agency shall specify that the obligations of the non-profit agency shall be enforceable by G-P and the United States. If G-P acting in good faith is unable to obtain any contracts required by Parts II-IV below that meet the requirements of this paragraph within the deadlines specified below, then the deadlines for the obtaining of those contracts and any subsequent related deadlines shall be automatically extended, and the parties shall work together to locate a suitable non-profit agency [or agencies] to carry out the projects identified in this Schedule D.

B. G-P may submit a request to EPA for approval of any proposed changes to an approved SEP, and EPA shall have 15 business days to respond to the request. Resolution of any disputes arising in the context of G-P's SEP implementation will be handled in accordance with Parts X and XI of this Consent Decree.

C. In the first quarterly report following completion of each SEP, G-P shall submit to EPA for approval a Final SEP Report containing the following information:

1

FAX TRANSMITTAL # 3

To: Pat Kennedy
From: Wendell Reed
Phone: 404/347-2904
Fax: 904/922-6979

1. a narrative description of the development and/or implementation of the SEP;

2. a final cost documentation for the SEP;

3. a certification that the SEP has been completed in accordance with the plans set forth in Sections II, III, and IV below, or as modified with EPA approval.

II. Southern Appalachian Mountains Initiative ("SAMI") Implementation. --

A. G-P agrees to undertake the following projects identified in the context of the Southern Appalachian Mountains Initiative ("SAMI") as provided in Paragraphs II.B. and II.C. below. The purpose of this SEP is to improve air quality in the Southern Appalachian ecosystem. G-P agrees to use best efforts to conclude this project and deliver, or have SAMI deliver on its behalf, a final written report on the completion of the projects funded according to Paragraphs (1)-(4) below to the United States. G-P shall require, as a condition of transfer of any funds to SAMI, that SAMI provide appropriate verification at the conclusion of each project identified in Paragraphs (1)-(4) below that the funds were spent in accordance with these conditions. The project shall include the following components:

(1) airshed modeling of the environmental benefits of different general air pollution control scenarios in the Southern Appalachian Mountains. G-P agrees to fund this project at a level of $200,000.

(2) preparing baseline and projected emission inventories for Clean Air Act and for various emission management options ("EMOs"). G-P agrees to fund this project at a level of $345,000.

(3) modeling to relate the changes in air quality due to the Clean Air Act and EMOs to effects benefits. G-P agrees to fund this project at a level of $300,000.

(4) refining and implementing the specific EMOs listed in this paragraph. G-P agrees to fund this project in the aggregate amount of $155,000:

(a) establishing a demonstration project (SAMI EMO #8) to reduce mobile source emissions in or near Class I National Parks within the Southern Appalachian Mountain region;

(b) undertaking an examination of various fuel formulations and alternative fuels (SAMI EMO # 88) in the Southern Appalachian Mountain region to compare different fuels' emissions and performance, and identify cost effective incentives; and

(c) implementing an electronic air emission database (SAMI EMO #89) for use by Federal Land Managers and SAMI permitting authorities.

B. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency to implement the environmental projects identified in this Part II on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall transfer $1,000,000 to the non-profit agency to fund the projects.

C. G-P agrees to condition the transfer of the funds to SAMI upon SAMI's agreement that none of the funds will be used by SAMI for administrative or other overhead expenses. In addition, G-P must specify in its agreement with SAMI that one or more of the projects being undertaken on G-P's behalf under Paragraph II.A above must result in the identification of sources of NOx emissions within the Southern Appalachian Mountain region that may be candidates for the generation of NOx offsets for the purposes of either the "Offset SEP" addressed at Section III of this Schedule or other similar offset purposes.

D. To the extent that all tasks under this SEP are not completed within four (4) years from the date of entry of this Consent Decree then the remaining portions of the SEP funds shall either be expended to the conclusion of the SEPs or be re-directed to a different SEP as agreed upon by the United States and G-P.

III. Acquisition of Permanent Nitrous Oxides ("NOx") Offsets Project.--

A. G-P agrees to perform this SEP for the acquisition of permanent reductions of NOx emissions from facilities located in the southeastern United States as provided in Paragraph III.B. below. The purpose of this SEP is to reduce emissions which contribute to the formation of ground level ozone that is detrimental to human health and the environment. Ozone has been identified as a particular problem in the Class I attainment areas in the Southern Appalachians.

B. This SEP requires G-P to pay for the installation of pollution control devices or the implementation of pollution prevention projects on or at facilities that are near the Southern Appalachian Class I areas that are significant sources of NOx emissions. G-P will pay for the equipment to "over-control" or to implement pollution prevention projects to reduce NOx emissions coming from one or more of these facilities so as to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P

to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P facilities are located.

1. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency (hereinafter any non-profit agency with which G-P enters into a contract pursuant to Parts III and IV shall be referred to as a "selected non-profit agency") to implement the environmental project identified in this Part III on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall deposit $2,750,000 in an interest bearing escrow account established specifically for the purpose of obtaining permanent NOx emissions offsets as specified below in this Part III. None of these funds may be used to pay for administrative or other overhead expenses by G-P, the selected non-profit agency, or other entities participating in this project.

2. G-P will participate, as necessary, with the selected non-profit agency, or other interested government agencies and other interested parties in attempts to locate acceptable sources of NOx offsets. To the extent practicable, SAMI emissions data, including the data produced under Sections II and III above, will be used in locating and selecting offset generators. Additional sources of emissions data can be obtained from the National Parks Service and the U.S. Forest Service.

3. G-P will work with SAMI to use best efforts to locate more than one, but not more than five, qualifying projects with as many tons of NOx offsets as is practicable. To the greatest extent practicable, in the selection process, G-P shall require in its contract with the selected non-profit agency that priority be given to potential offset generators that meet the criteria set forth in this Section. G-P shall also require in its contract with the selected non-profit agency that preference be given to NOx generators that make additional contributions to the cost of the emissions reduction project, such as agreeing to pay a percentage of the initial purchase price of air pollution control technology or a percentage of the operation and maintenance costs of the equipment. G-P shall also require that in its contract with the selected non-profit agency that best efforts be used to ensure that offsets acquired are purchased at the lowest reasonable price.

4. G-P will arrange with the selected non-profit agency to use best efforts to obtain offsets as near as possible (within 100 kilometers) to the following Clean Air Act Class I attainment areas: Shenandoah, Great Smoky Mountains, James River Face, Linville Gorge, Shining Rock, Joyce Kilmer/Slickrock,

Cohutta, or Sipsey. The United States agrees that offsets shall not be obtained for the purpose of this SEP from G-P's competitors nor have an adverse effect on G-P's competitive position.

5. G-P shall require in its contract with the selected non-profit agency that any NOx generator seeking to qualify for funding for the acquisition of permanent NOx offsets under this Section comply with the following criteria:

(i). Offsets must be generated by the installation of pollution control equipment or equivalent permanent pollution prevention projects that are directed at controlling NOx emissions;

(ii). Offsets must be permanently retired and no annual credits of NOx can be used as the basis of the offsets;

(iii). Offsets must be incorporated into state or local permits or other appropriate federally enforceable, permanent restrictions;

(iv). Generators must not be otherwise legally required to control the NOx emissions that are to be used for offsets; and

(v). The qualifying offsets may only be used once by an offset generator and solely for the purpose of this SEP. Offset generators cannot use any emissions reductions achieved as a result of implementing this SEP for any other emission trading or credit scheme.

6. Upon presentation by the selected non-profit agency to G-P of appropriate documentation that a specific source of NOx offsets has been identified and concurrence by the United States and G-P that the offsets will conform to the criteria set forth in this Section, G-P will promptly authorize the release of the necessary funds to the selected non-profit agency from the escrow account for the selected non-profit agency to pay to the generator of the offsets for the purpose of acquiring the offsets.

C. To the extent that NOx offsets are not obtained pursuant to this Section either by G-P or by another entity acting on G-P's behalf, within four years from the date of entry of this Consent Decree or in the event that G-P is unable to obtain the selected non-profit agency's or another entity's agreement to the conditions for transfer of funds specified in this Section, respectively, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

IV. Development of Lumber Kiln Emissions Data Project.--

A. G-P agrees either to conduct a comprehensive air emissions assessment of lumber kilns or to have a designated entity perform the assessment on G-P's behalf with G-P's funding, as specified in Paragraph IV.C. below. The purpose of this SEP is to identify and quantify the air emissions that result from the lumber kiln drying process. These kiln emissions have not been previously quantified because insufficient test protocols and test methods are all that is currently available for their evaluation. This SEP will assist with the development of a test protocol for lumber kilns and result in the collection of data useful in establishing State Implementation Plan ("SIP") requirements and/or major source determinations.

B. G-P agrees that within 60 days of entry of this Consent Decree it will propose to EPA a designated entity to perform this Lumber Kiln Emissions Data project on G-P's behalf which meets the requirement of this Section, and shall provide EPA with a plan for the assessment. EPA shall then have 30 days to approve or disapprove G-P's designation and assessment plan.

C. Within 30 calendar days of receipt of EPA approval of the designation of the entity and plan to conduct a lumber kiln emissions data project, G-P shall transfer $500,000 to the designated entity to conduct the assessment on G-P's behalf, as the basis for establishing test protocols for air pollutant emissions from lumber kilns.

D. G-P agrees to cooperate with the designated entity to undertake this study, including the use of some of G-P's lumber kilns, as necessary, to develop data in this study.

E. G-P agrees to condition the transfer of these funds to the designated entity upon the entity's agreement that it will perform the work on G-P's behalf and that the following criteria will be met:

1. the entity agrees that the purpose of the study is to enable the establishment of lumber kiln air emissions generally;

2. the entity agrees to use best efforts to complete the study and submit a final written report to G-P within a time specified by EPA;

3. the entity agrees that it will make the final report available to state and local agencies and the public-at-large; and

4. the entity agrees to submit to G-P within 30

calendar days of delivery of the final report, appropriate verification that the funds designated for this SEP were spent in accordance with the conditions set forth in this Section.

F. To the extent that all tasks under this SEP are not completed within three years from the date of entry of this Consent Decree, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

to reduce the amount of ozone in those Class I attainment areas. This SEP will result in quantifiable reductions of pollutants in or near the Class I attainment areas close to where the G-P facilities are located.

1. G-P agrees that within 60 calendar days of entry of this Consent Decree, G-P shall enter into a contract with a non-profit agency (hereinafter any non-profit agency with which G-P enters into a contract pursuant to Parts III and IV shall be referred to as a "selected non-profit agency") to implement the environmental project identified in this Part III on its behalf. (It is contemplated by the United States and G-P that the non-profit agency will be SAMI.) Within thirty days of execution of the contract, G-P shall deposit $2,750,000 in an interest bearing escrow account established specifically for the purpose of obtaining permanent NOx emissions offsets as specified below in this Part III. None of these funds may be used to pay for administrative or other overhead expenses by G-P, the selected non-profit agency, or other entities participating in this project.

2. G-P will participate, as necessary, with the selected non-profit agency, or other interested government agencies and other interested parties in attempts to locate acceptable sources of NOx offsets. To the extent practicable, SAMI emissions data, including the data produced under Sections II and III above, will be used in locating and selecting offset generators. Additional sources of emissions data can be obtained from the National Parks Service and the U.S. Forest Service.

3. G-P will work with SAMI to use best efforts to locate more than one, but not more than five, qualifying projects with as many tons of NOx offsets as is practicable. To the greatest extent practicable, in the selection process, G-P shall require in its contract with the selected non-profit agency that priority be given to potential offset generators that meet the criteria set forth in this Section. G-P shall also require in its contract with the selected non-profit agency that preference be given to NOx generators that make additional contributions to the cost of the emissions reduction project, such as agreeing to pay a percentage of the initial purchase price of air pollution control technology or a percentage of the operation and maintenance costs of the equipment. G-P shall also require that in its contract with the selected non-profit agency that best efforts be used to ensure that offsets acquired are purchased at the lowest reasonable price.

4. G-P will arrange with the selected non-profit agency to use best efforts to obtain offsets as near as possible (within 100 kilometers) to the following Clean Air Act Class I attainment areas: Shenandoah, Great Smoky Mountains, James River Face, Linville Gorge, Shining Rock, Joyce Kilmer/Slickrock,

Cohutta, or Sipsey. The United States agrees that offsets shall not be obtained for the purpose of this SEP from G-P's competitors nor have an adverse effect on G-P's competitive position.

5. G-P shall require in its contract with the selected non-profit agency that any NOx generator seeking to qualify for funding for the acquisition of permanent NOx offsets under this Section comply with the following criteria:

(i). Offsets must be generated by the installation of pollution control equipment or equivalent permanent pollution prevention projects that are directed at controlling NOx emissions;

(ii). Offsets must be permanently retired and no annual credits of NOx can be used as the basis of the offsets;

(iii). Offsets must be incorporated into state or local permits or other appropriate federally enforceable, permanent restrictions;

(iv). Generators must not be otherwise legally required to control the NOx emissions that are to be used for offsets; and

(v). The qualifying offsets may only be used once by an offset generator and solely for the purpose of this SEP. Offset generators cannot use any emissions reductions achieved as a result of implementing this SEP for any other emission trading or credit scheme.

6. Upon presentation by the selected non-profit agency to G-P of appropriate documentation that a specific source of NOx offsets has been identified and concurrence by the United States and G-P that the offsets will conform to the criteria set forth in this Section, G-P will promptly authorize the release of the necessary funds to the selected non-profit agency from the escrow account for the selected non-profit agency to pay to the generator of the offsets for the purpose of acquiring the offsets.

C. To the extent that NOx offsets are not obtained pursuant to this Section either by G-P or by another entity acting on G-P's behalf, within four years from the date of entry of this Consent Decree or in the event that G-P is unable to obtain the selected non-profit agency's or another entity's agreement to the conditions for transfer of funds specified in this Section, respectively, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

IV. Development of Lumber Kiln Emissions Data Project.--

A. G-P agrees either to conduct a comprehensive air emissions assessment of lumber kilns or to have a designated entity perform the assessment on G-P's behalf with G-P's funding, as specified in Paragraph IV.C. below. The purpose of this SEP is to identify and quantify the air emissions that result from the lumber kiln drying process. These kiln emissions have not been previously quantified because insufficient test protocols and test methods are all that is currently available for their evaluation. This SEP will assist with the development of a test protocol for lumber kilns and result in the collection of data useful in establishing State Implementation Plan ("SIP") requirements and/or major source determinations.

B. G-P agrees that within 60 days of entry of this Consent Decree it will propose to EPA a designated entity to perform this Lumber Kiln Emissions Data project on G-P's behalf which meets the requirement of this Section, and shall provide EPA with a plan for the assessment. EPA shall then have 30 days to approve or disapprove G-P's designation and assessment plan.

C. Within 30 calendar days of receipt of EPA approval of the designation of the entity and plan to conduct a lumber kiln emissions data project, G-P shall transfer $500,000 to the designated entity to conduct the assessment on G-P's behalf, as the basis for establishing test protocols for air pollutant emissions from lumber kilns.

D. G-P agrees to cooperate with the designated entity to undertake this study, including the use of some of G-P's lumber kilns, as necessary, to develop data in this study.

E. G-P agrees to condition the transfer of these funds to the designated entity upon the entity's agreement that it will perform the work on G-P's behalf and that the following criteria will be met:

1. the entity agrees that the purpose of the study is to enable the establishment of lumber kiln air emissions generally;

2. the entity agrees to use best efforts to complete the study and submit a final written report to G-P within a time specified by EPA;

3. the entity agrees that it will make the final report available to state and local agencies and the public-at-large; and

4. the entity agrees to submit to G-P within 30

calendar days of delivery of the final report, appropriate verification that the funds designated for this SEP were spent in accordance with the conditions set forth in this Section.

F. To the extent that all tasks under this SEP are not completed within three years from the date of entry of this Consent Decree, then the remaining portions of the SEP funds shall either be expended to conclusion or be re-directed to a different SEP, as agreed upon by the United States and G-P.

Department of Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Virginia B. Wetherell
Secretary

August 29, 1996

Mr. Martin Costello
DARM - NSR Section, Mail Sta. #5500
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2600

Dear Mr. Costello:

Putnam Co. - AP
Georgia-Pacific Corporation
Hawthorne Plywood Plant
#1,2,3 Dryers Modification Application

Per Messrs. Linero and Costello's E-Mails dated August 23 and 29th, respectively, regarding the construction permit application submitted by Georgia-Pacific Corporation (G-P), the Northeast District (NED) understands that DARM is proceeding with determinations of BACT and/or PSD applicability. Therefore, the construction permit application is being transferred to DARM for processing. The application was submitted to the NED office on August 21, 1996 and a request for additional information will need to be sent from DARM to G-P no later than September 19, 1996. The NED has not initiated review of the construction permit application.

While NED understands Mr. Costello's request for additional information in the 8/29 E-Mail. The requested information may be included in the G-P Hawthorne Plant Title V permit application. It is our decision that the Title V application will not be searched to see if the requested information is in it because this office does not want the T-V processing clock initiated.

If it is decided that BACT and/or PSD determinations are not required, please provide the NED with a written determination and transfer the application to this office for processing with sufficient review time available.

If there are any questions, contact Bob Leetch at 904-448-4310 ext 234 (SC 880-4310) or Johnny Cole at ext 236.

Sincerely,

Christopher L. Kirts, P.E.
District Air Program Administrator

cc: Margarete M. Vest, P.E.
Clair Fancy, P.E.
Al Linero, P.E.
Jim Pennington, P.E.
John Brown, P.E.