Prevention of Significant Air Quality Deterioration Review

Preliminary Determination

April 2014
Facility Name: Georgia-Pacific Wood Products LLC (Madison, GA Plywood Facility)
City: Madison
County: Morgan
AIRS Number: 04-13-211-00013
Application Number(PSD, Title V): 22349
Date Application Received: December 30, 2013

Review Conducted by:
State of Georgia - Department of Natural Resources
Environmental Protection Division - Air Protection Branch
Stationary Source Permitting Program

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SUMMARY

The Georgia Environmental Protection Division (EPD) has reviewed the application submitted by Georgia-Pacific Wood Products LLC (Madison, GA Plywood Facility) (a.k.a. Georgia-Pacific) for plant modifications to increase the plant's production capacity.

The existing Georgia-Pacific operation in Madison is a major source under the Prevention of Significant Deterioration (PSD) regulation. Collectively, the proposed project will result in an emissions increase in Nitrogen Oxides (NOx), Sulfur Dioxide (SO_2), Particulate Matter (PM), Particulate Matter with an aerodynamic diameter of ten microns or less (PM_{10}), Particulate Matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$), Greenhouse Gases (CO2e), and Volatile Organic Compounds (VOCs). A Prevention of Significant Deterioration (PSD) analysis was performed for this modification for all *regulated NSR pollutants* to determine if any emissions increase was above the applicable PSD *significant emission rate*. The VOC emissions increase was above the applicable PSD significant emission rate threshold. Thus, the proposed modification is classified as a major PSD modification to an existing PSD major source.

Georgia-Pacific anticipates emission increases of hazardous air pollutants (HAPs) from the proposed modification as well. These HAPs include acetophenone, acrolein, benzene, bis (2-ethyhexyl) phthalate, formaldehyde, hexane, MIBK, naphthalene, phenol, propionaldehyde, styrene, toluene and xylene.

Georgia-Pacific is located in Morgan County, which is classified as "attainment" or "unclassifiable" for SO_2, $PM_{2.5}$ and PM_{10}, NO_2, and CO. Morgan County is classified as an area contributing to the ambient air level of ozone in the metropolitan Atlanta ozone non-attainment area per Georgia Rule 391-3-1-.03(8)(e).

The Georgia EPD review of the data submitted by Georgia-Pacific related to the proposed project indicates that the proposed modification will be in compliance with all applicable state and federal air quality regulations.

It is the preliminary determination of the EPD that the proposal provides for the application of Best Available Control Technology (BACT) for the control of VOC emissions, as required by federal PSD regulation 40 CFR 52.21(j). In addition, the *Plywood and Composite Wood Products* NESHAP provides for the Maximum Achievable Control Technology (MACT) for the control of HAP emissions, as required by federal regulation 40 CFR 63.

It has been determined through approved modeling techniques that the estimated emissions will not cause or contribute to a violation of any ambient air standard of ozone in the area surrounding the facility or in Class I areas located within 300 km of the facility. It has further been determined that the proposal will not cause impairment of visibility or detrimental effects on soils or vegetation. Any air quality impacts produced by project-related growth should be inconsequential.

This Preliminary Determination concludes that an Air Quality Permit should be issued to Georgia-Pacific for the projects to increase the plant's production capacity. Various conditions have been incorporated into the current Title V operating permit to ensure and confirm compliance with all applicable air quality regulations. A copy of the draft permit amendment is included as a separate document. This Preliminary Determination also acts as a narrative for the Title V Permit.

1.0 INTRODUCTION – FACILITY INFORMATION AND EMISSIONS DATA

Georgia-Pacific Wood Products LLC (Madison GA Plywood Facility) (Georgia-Pacific) submitted a PSD application for a modification at their facility located at 1400 Woodkraft Road, Madison, Morgan County, Georgia. The application was received on December 30, 2013.

Facility Name and Owner Name

The owner of the facility has changed from Georgia-Pacific Building Products LLC to Georgia-Pacific Wood Products LLC. The name of the facility has changed from Georgia-Pacific Wood Products LLC to Georgia-Pacific Wood Products LLC (Madison GA Plywood Facility). Note that Application No. 22349 contains the wrong name of the facility in question.

Title V Applicability

The Title V site is a major source under 40 CFR 70 because potential emissions of one or more criteria air pollutants is greater than or equal to 100 tons per year and potential emissions of an individual hazardous air pollutant (HAPs) is equal to or greater than 10 tons per year and 25 tpy for a combination of HAPs. Table 1-2 specifies the Title V Major source status of the facility upon installation and operation of the proposed project. Note: The data for Table 1-2 comes from Table 13 of the facility's SIP Application found in Attachment A of the application package.

Table 1-2: Title V Major Source Status for Title V Site

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓ >100 tpy		
PM_{10}	Yes	✓ >100 tpy		
$PM_{2.5}$	Yes	✓ >100 tpy		
SO_2	Yes			✓ <100 tpy
VOC	Yes	✓ >100 tpy		
NO_x	Yes	✓ >100 tpy		
CO	Yes	✓ >100 tpy		
TRS	n/a			✓
H_2S	n/a			✓
Individual HAP Formaldehyde	Yes	✓ >10		
Hydrogen Chloride		>10		
Methanol		>10		
Phenol		>10		
Total HAPs	Yes	✓ >25		

Table 1-2: Title V Major Source Status for Title V Site

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
GHG (CO_2e)	Yes	✓ >100,000		

Table 1-3 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to Georgia-Pacific, based on a review of the "Permit" file(s) on the facility found in the Air Branch office.

Table 1-3: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
4911-245-0003-V-03-0	August 7, 2012	Title V Renewal
Off-Permit Letter Dated September 21, 2012	October 2, 2012	Add an additional router and an additional operator per shift to both patch lines. These patch lines are part of Existing Emission Unit ID No. 500 (Finishing). Remove the Radio Frequency Oven which is no longer in operation. Anticipate no net emissions increase. Project has been completed.
Off-Permit Letter Dated September 24, 2012	November 5, 2012	Replacement of "Log Cut-up System Project has been completed.
Off-Permit	November 20, 2012	Modify the "Cut-to-Size Applicator" Project has been completed.
No Permit Required	Received June 11, 2013	Installation of inkjet printers on the glue line (Emission Unit ID No. 400). Project has been completed.
Off-Permit	December 4, 2013	Replacement of Green Veneer Production Cyclones (ID Nos. WC1 and WC2) Project has been completed.

PSD Applicability Analysis

The Title I site major source threshold for any *regulated NSR* pollutant is 250 tons per year because Georgia-Pacific is a wood-products plant which is not one of the 28 listed source categories in the PSD regulation. This Title I site classified as an existing major Title I site for emissions of carbon monoxide (CO), nitrogen oxides (NOx), Particulate Matter (PM), Particulate Matter with an aerodynamic diameter of ten microns or less (PM_{10}), Particulate Matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$), and Volatile Organic Compounds (VOCs). Greenhouse gas emissions (GHG, expressed as CO_2e) is a *regulated NSR pollutant*, in this case, because potential emissions exceed 100,000 tons per year. The Title I site is classified as a major source for greenhouse gases (GHG, expressed as CO_2e) because potential emissions exceed 100 tons per year.

The applicant determined if the proposed modification would trigger the PSD major modification provisions of Georgia Rule 391-3-1-.02(7).

Per this Rule 391-3-1-.02(7) a ***major modification*** is defined as follows:
means any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase (as defined in paragraph 40 CFR 52.21(b)(40)-

[Referred to as Step 1]) of a regulated NSR pollutant (as defined in paragraph 40 CFR 52.21(b)(50)); and a significant net emissions increase [Referred to as Step 2] of that pollutant from the major stationary source.

PSD Applicability Step 1: The applicant computed a ***significant emissions increase*** using (1) ***potential to emit*** for the new units, (2) ***net emissions increase*** for existing units which will undergo a physical change in or change in the method of operation, and (3) ***net emissions increase*** for existing units which will not undergo a physical change in or change in the method of operation but are affected by the proposed project. The applicant presented a PSD applicability discussion in Chapters 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, Appendix B, and Appendix D.

Table 1-4 specifies the emission factor references and this data was taken from Appendix B.

Table 1-4: Listing of Emission Factor References

Source Group	VOC	PM	PM10	PM2.5	SO2	NOx	CO	CO_2e
Green Veneer Production	2013 NCASI Wood Products Database plus safety factor	EPA FIRE database	EPA FIRE database EPA PM CALC database AP-42 Section 13.2.3 2013 testing of the chipper cyclone at the GP Warrenton Mill for PM10 percentage.	EPA FIRE database EPA PM CALC database AP-42 Section 13.2.3 2013 testing of the chipper cyclone at the GP Warrenton Mill for PM2.5 percentage.	NA	NA	NA	NA
Veneer Dryers	Hot Vents: WPP1 VOC using 92.3% VOC control efficiency. Cooling Vents: WPP1 VOC	Hot Vents: NCASI Wood Products Database Feb 2013 plus safety factor Cooling Vents: Rebuilt dryer from June 11-19, 2013 site-specific test data. New dryer from vendor data.	Hot Vents: NCASI Wood Products Database Feb 2013 plus safety factor Cooling Vents: Rebuilt dryer from June 11-19, 2013 site-specific test data. Not approved by GA EPD New dryer from vendor data.	Hot Vents: NCASI Wood Products Database Feb 2013 plus safety factor Cooling Vents: Rebuilt dryer from June 11-19, 2013 site-specific test data. Not approved by GA EPD. New dryer from vendor data.	Hot Vents: AP-42 Section 1.4 for NG combustion. Cooling Vents: No emissions.	Hot Vents: NCASI Wood Products Database Feb 2013 plus safety factor. Cooling Vents: No emissions	Hot Vents: NCASI Wood Products Database Feb 2013 plus safety factor Cooling Vents: AP-42 Section 10.5 plus safety factor	Hot Vents: EPA GHG Mandatory Reporting Rule for NG combustion. Cooling Vents: No emissions

Table 1-4: Listing of Emission Factor References								
Source Group	**VOC**	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**CO**	**CO_2e**
Glue Lines and Presses	Glue Lines: Sum of individual organic compounds which were taken from 2004 EPA Method T08 Existing Presses: WPP1 New Press: WPP1	Glue Lines: No emissions. Existing Presses: Site specific test data from 9/25/2013. Not approved by GA EPD. New Press: Site specific test data from 9/25/2013. Not approved by GA EPD.	Glue Lines: No emissions. Existing Presses: Site specific test data from 9/25/2013. Not approved by GA EPD. New Press: Site specific test data from 9/25/2013. Not approved by GA EPD.	Glue Lines: No emissions. Existing Presses: Site specific test data from 9/25/2013. Not approved by GA EPD. New Press: Site specific test data from 9/25/2013. Not approved by GA EPD.	Glue Lines: No emissions. Existing Presses and New Press: No emissions.	Glue Lines: No emissions. Existing Presses and New Press: No emissions.	Glue Lines: No emissions. Existing Presses and New Press: No emissions.	Glue Lines: No emissions. Existing Presses and New Press: No emissions.
Dry Waste Systems	WPP1	Baseline factor based on average of source specific test data 7/23-24/2013. Projected factor is average test data plus 20% safety factor. AP-42 Section 13.2.4.	Baseline factor based on average of source specific test data 7/23-24/2013. Projected factor is average test data plus 20% safety factor. Test data not approved by GA EPD.	Baseline factor based on average of source specific test data 7/23-24/2013. Projected factor is average test data plus 20% safety factor. Test data not approved by GA EPD.	No emissions	No emissions	No emissions	No emissions
Sander System	WPP1	Baseline factor based on average of source specific	Baseline factor based on average of source specific test data July	Baseline factor based on average of source specific test data July 24,	No emissions.	No emissions.	No emissions.	No emissions.

Table 1-4: Listing of Emission Factor References								
Source Group	**VOC**	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**CO**	**CO_2e**
		test data July 24, 2013. Projected factor is average test data plus 20% safety factor.	24, 2013. Projected factor is average test data plus 20% safety factor.	2013. Projected factor is average test data plus 20% safety factor.				
Specialty Saw System	WPP1	Baseline factor based on average of source specific test data July 24, 2013. Projected factor is average test data plus 20% safety factor.	Baseline factor based on average of source specific test data July 24, 2013. Projected factor is average test data plus 20% safety factor.	Baseline factor based on average of source specific test data July 24, 2013. Projected factor is average test data plus 20% safety factor.	No emissions.	No emissions.	No emissions.	No emissions.
Boiler[1]	Site Specific test data from August 10-13, 2009. Average selected for baseline actual. Highest test run selected as projected actual.	Baseline based on test data from Madison during the 2004-2005 time period. Projected actual based on average test data plus one standard deviation from Madison before CAM was required.	Madison test data plus condensable portion taken from AP-42 Table 1.6	Madison test data plus condensable portion taken from AP-42 Table 1.6.	Site Specific test data from August 10-13, 2009 with the average selected for baseline and highest test run for project actual.	Baseline data taken from temporary CEMS 07/26/12 through 01/16/13. Future target rate based on combustion improvements.	Baseline: GP did not compute a true baseline actual because this numerical value would be greater than the projected actual (which would include combustion improvements).	EPA's GHG Mandatory Reporting Rule.

Georgia EPD reviewed the 2013 test data for the veneer dryer cooling zones and from the presses. Georgia EPD determined that all aspects of the test methods for determination of PM, PM_{10}, and $PM_{2.5}$ from the veneer dryer cooling zones were not clearly followed.

[1] From Application No. 21174 dated July 15, 2012: There is test data from October 14, 2004, June 16, 2005, June 15, 2006, August 18, 207, August 27, 2009, and August 24, 2011.

Georgia EPD reviewed the 2013 test data for the PC2 cyclone (dry waste conveying system) and PF2 baghouse (dry waste transfer system) and determined, for both tests, that the PM_{10} and $PM_{2.5}$ were derived from the filterable PM using particle size analysis via light scattering/obscuration techniques. These are not approved US EPA methods. PM emissions according to Method 201A may be significantly different.

Georgia EPD reviewed the 2013 test data for the presses (No. 1 Roof Vent) for particulate matter (filterable and condensable). Georgia-Pacific claimed that the PM emissions measured during the tests were based on 100% capture efficiency because they constructed a Temporary Total Enclosure around the presses according to Reference Method 204. A review of the Method 204 requirements showed that the Temporary Total Enclosure used by Georgia-Pacific did not meet all of the criteria for a TTE. First, Method 204 is used to verify the capture of volatile organic compounds going to a control device. This test program at Georgia-Pacific was for several types of PM emissions going directly to the atmosphere. There is no data to support a claim that PM emissions behave the same as VOC emissions in an atmosphere. Second, there are five (5) criteria in Method 204 that must be met to claim 100% capture. The tests did not meet two (2) criteria, did meet two (2) criteria, and there was not enough data to verify meeting one (1) criteria. There are four (4) quality control stops required by the method. There was not enough data on any of these requirements and one requirement may not be possible to meet for PM emissions. Consequently, 100% capture of the PM emissions was not demonstrated and there was not enough data provided to estimate how much was capture.

Georgia-Pacific did not calculate the boiler CO emissions which could have been accommodated during the baseline correctly.

Table 1-5 specifies the method used to calculate the project net emissions increase.

Table 1-5: Method Used to Compute Step 1 of the Net Emissions Increase

Emission Unit ID No.	Emission Unit Description	Comment(s)	Net Emission Estimation Option A- Treated as New Unit Using PTE	Emission Estimation Option B – No Demand Growth (BAE-PAE)	Emission Estimation Option C- Accommodates Demand Growth
EU100	Log Trimmer System	Affected emission unit	No	No	Yes
EU102	Lilypad Chipper	Affected emission unit	No	No	Yes
EU100	Debarkers	Modified emission unit, enclosure added	Yes	No	No
EU107	Bark Hog/Fuel House	Affected emission unit	No	No	Yes
EU101, EU103, EU104	Whole Log Chippers Core Chippers Veneer Chippers	Affected emission unit	No	No	Yes
EU105, EU106	Shaker Screen Overs Rechipper	Affected emission unit	No	No	Yes

Table 1-5: Method Used to Compute Step 1 of the Net Emissions Increase					
Emission Unit ID No.	**Emission Unit Description**	**Comment(s)**	**Net Emission Estimation Option A- Treated as New Unit Using PTE**	**Emission Estimation Option B – No Demand Growth (BAE-PAE)**	**Emission Estimation Option C- Accommodates Demand Growth**
WC1, WC2, WC4	Chip Conveying System Chip Loading Truck Chip Loading Railcar	Affected emission unit.	No	No	Yes
EU108	Log Soaking Vats	Affected emission unit	No	Yes	No
EU300	**New** 23 Section Veneer Dryer	New emission unit as part of Phase I of the project.	Yes	No	No
EU300	**New** 18 Section Dryer added in Phase II of project.	New emission unit as part of Phase II of the project.	Yes	No	No
EU300	Shutdown of 24-Section Dryer #1 and associated cooling vents	Removed emission unit as part of Phase I.	No	Yes	No
EU300	20-Section Dryer #2 and associated cooling vents	Rebuilt in Phase II as a 10-Section Dryer and associated cooling vents. OR Replaced with a new dryer	No	Yes	No
EU300	16-Section Dryer #3 and associated cooling vents	To be taken out of service after Phase II.	No	Yes	No
EU300	10-Section Veneer Dryer #4 and associated cooling vents.	To be taken out of service in Phase I if applicant does not proceed with Phase II. If applicant proceeds with Phase II, this dryer is to be taken out of service after Phase II.	Yes	No	No

Table 1-5: Method Used to Compute Step 1 of the Net Emissions Increase					
Emission Unit ID No.	**Emission Unit Description**	**Comment(s)**	**Net Emission Estimation Option A- Treated as New Unit Using PTE**	**Emission Estimation Option B – No Demand Growth (BAE-PAE)**	**Emission Estimation Option C- Accommodates Demand Growth**
EU400	New Glueline	New emission unit as part of Phase I	Yes	No	No
EU400	Rebuilt Glueline	Rebuild in Phase I.	Yes	No	No
EU403	Existing Presses	Modified emission units in Phase I.	No	Yes	No
EU403	New Press	New emission unit as part of Phase II	Yes	No	No
EU502, EU700	Dry Waste Transfer System (PF1)	Modified emission unit	No	Yes	No
EU402, EU501	Dry Waste Transfer System (PF2) Dry Waste Conveying System Dry Waste Truck Loading	Modified emission unit Affected emission unit Affected emission unit	No	Yes	No
PC1 and PC2	Dry Waste Conveying System	Affected emission unit	Yes	No	No
EU700	Specialty Machine System	Affected emission unit	No	Yes	No
EU600	Sander System	Affected emission unit	No	Yes	No
EU800	Boiler	Modified emission unit as part of Phase I	No	Yes	No
Roads	Roads	Affected emissions unit	No	No	Yes
IC Engine	Diesel Fire Pump Engine	NA	NA	NA	NA
TANKS	Resin Tanks	Affected emission unit	No	Yes	No
PCWP	PCWP Misc. Coatings	Affected emission unit.	No	Yes	No
ASH	Ash Bins-Material transfer and storage	Affected emission unit	No	Yes	No

Table 1-5: Method Used to Compute Step 1 of the Net Emissions Increase					
Emission Unit ID No.	**Emission Unit Description**	**Comment(s)**	**Net Emission Estimation Option A- Treated as New Unit Using PTE**	**Emission Estimation Option B – No Demand Growth (BAE-PAE)**	**Emission Estimation Option C- Accommodates Demand Growth**
EU501	Modification of dry waste transfer system (PF2) Trim Saw Flying Saw	 Add in Phase II Add in Phase II	No		
Process Baghouse(s)	Chapter 3.1.4 notes that GP will upgrade existing baghouse(s) and add baghouse(s). Note: This is in error	This is in error based on GP's letter to EPD undated and received 2/14/2014.	NA	NA	NA

Georgia EPD computed the step 1 project net emissions increase from data provided in Appendix B of the application. Georgia EPD emission estimates do not exactly match Georgia-Pacific's estimates. Tables 1-6 and 1-7 provide the step 1 project net emissions increase for Phases I and Phases II of the project.

Table 1-6: Step 1 Project Net Emissions Increase for Phase I									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
100	Green Wood Production	9.33	3.39	1.15	5.82	0.0	0.0	0.0	0.0
300	Veneer Dryers Hot Zones	1.95	9.97	9.97	61.92	0.02	2.13	26.18	3,480
300	Veneer Dryers Cooling Zones	4.06	4.00	3.32	21.37	0.0	0.0	13.87	0.0
400	Glue Lines and Presses	0.85	0.29	0.29	57.43	0.0	0.0	0.0	0.0
	Dry Waste Transfer System	14.106	0.86	0.54	11.86	0.0	0.0	0.0	0.0
700	Specialty Machine System	0.41	0.30	0.0	10.81	0.0	0.0	0.0	0.0
600	Sander System	1.11	0.30	0.28	14.29	0.0	0.0	0.0	0.0
800	Boiler	1.8	5.7	5.5	12.88	3.25	34.09	-42.0	58,111
	Roads	0.5	0.0	0.0	0.0	0.0	0	0.0	0.0
	Ash Bins	0.05	0.02	0.00071	0.0	0.0	0	0.0	0.0

Table 1-6: Step 1 Project Net Emissions Increase for Phase I									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
	PCWP Misc. Coatings	0.0	0.0.	0.0	10.79	0.0	0.0	0.0	0.0
	Total	34.16	24.8	21.05	207.17	3.27	36.23	-28.13	61,591
PSD Threshold		**25**	**15**	**10**	**40**	**40**	**40**	**100**	**75,000**
Triggers PSD?		**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**No**

Table 1-7: Step 1 Project Net Emissions Increase for Phase I + Phase II									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
100	Green Wood Production	7.66	3.15	1.10	8.47	0.0	0.0	0.0	0.0
300	Veneer Dryers Hot Zones	3.09	15.78	15.78	63.54	0.02	2.19	26.85	3,993
300	Veneer Dryers Cooling Zones	7.95	7.85	6.50	21.92	0.0	0.0	14.22	0.0
400	Glue Lines and Presses	1.12	0.39	0.38	79.47	0.0	0.0.	0.0.	0.0
	Dry Waste Transfer System	14.18	0.912	0.67	16.64	0.0	0.0	0.0	0.0
700	Specialty Machine System	0.42	0.35	0.33	11.25	0.0	0.0	0.0	0.0
600	Sander System	1.11	0.34	0.28	14.84	0.0	0.0	0.0	0.0
800	Boiler	1.82	6.18	6.01	13.43	3.36	38.13	-41.8	59,596
	Roads	0.35	0.08	0.02	13.43	0.0	0.0	0.0	0.0
	Ash Bins	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0
	PCWP Misc. Coatings	0.0	0.0	0.0	-3.10	0.0	0.0	0.0	0.0
	Total	37.75	35.05	31.07	239.89	3.38	40.32	-0.73	63,589
PSD Threshold		**25**	**15**	**10**	**40**	**40**	**40**	**100**	**75,000**
Triggers PSD?		**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**	**No**

PSD Applicability – Step 2 – Calculate Net Emissions Increase: Georgia-Pacific completed a full netting analysis for the proposed project considering all contemporaneous emission increases and decreases that have occurred at the Madison Plant in the last 5 years, as well as those planned up to completion of construction of this project. As part of the proposed projects, three existing emission units will be shutdown (Dryer Nos. 1, 3, and 4). There is also a reduction in PM emissions at the debarker when comparing future emissions to baseline actual emissions. Per US EPA guidance[2], changes that result in an emission reduction should be placed in "Step 2" of the emission calculations even if they result from the project.

[2] US EPA, "Emissions Decreases Integral to Projects", June 7, 2010

Contemporaneous Projects as Part of Step 2 of PSD Applicability

Table 1-8 specifies the contemporaneous projects included in Step 2 of this PSD Applicability analysis.

Table 1-8: Net Emissions Increases/Decreases from Contemporaneous Projects						
Project #	**Project Note**	**PM (tpy)**	**PM10 (tpy)**	**PM2.5 (tpy)**	**VOC (tpy)**	**Notes**
1	Sand Plywood from other GP Facilities, December 2011	0	0	0	0	Off-permit change
2	Panel Oil project, February 2012	0	0	0	0	Project was not performed
3	Panel Oil project, May 2012	0	0	0	14.6	Permitted 5/30/2012
4	Gap Closure, June 2012	Project completed. Emission units which make up this project are affected emission units for the proposed project and so any emissions increases are incorporated in step 1 of this PSD applicability analysis.				
5	Patchline Router, Remove RF Oven, September 2012	-0.05	-0.09	-0.09	-3.15	Emission reduction from removal of RF oven which last operated in March 2010
6	Upgrade Log Cut-Up System, September 2012	Project completed. Emission units which make up this project are affected emission units for the proposed project and so any emissions increases are incorporated in step 1 of this PSD applicability analysis.				NA
7	Cut to Size Applicator, October 2012	Project completed. Emission units which make up this project are affected emission units for the proposed project and so any emissions increases are incorporated in step 1 of this PSD applicability analysis.				NA
8	Install inkjet printers on the glue line June 2013	0	0	0	0	0
9	Replace cyclones WC1 and WC2, December 2013	0	0	0	0	0
10	Shutdown of 24-Section Veneer Dryer #1 and associated cooling vents	-7.88	-11.9	-11.9	-19.45	Associated with Phase I of this Application.
11	Enclose the debarker which is a part of Source Group ID No. 100	-6.89	-3.79	-1.31	0.0	Associated with Phase I of this Application
12	Shutdown of 16-Section Veneer Dryer	-4.23	-2.08	-0.85	-5.31	Associated with Phase II of this

Table 1-8: Net Emissions Increases/Decreases from Contemporaneous Projects						
Project #	**Project Note**	**PM (tpy)**	**PM10 (tpy)**	**PM2.5 (tpy)**	**VOC (tpy)**	**Notes**
	#3 and associated cooling vents Shutdown of 10-Section Veneer Dry #4 and associated cooling vents					Application
13	Rebuild of Glue Line	0	0	0	-0.65	Associated with Phase I of this Application.
14	Removal of Lily Pad Chipper	-0.16	-0.08	-0.08	0.0	Associated with Phase II of this Application

Georgia EPD computed the step 2 project net emissions increase from data supplied in Appendix B. Georgia EPD emission estimates do not match exactly with Georgia-Pacific's estimates for some reason. Tables 1-9 and 1-10 specify the "Step 1" plus "Step 2"net emissions increase for Phase I and Phase I plus Phase II, respectively.

Table 1-9: Step 2 Project Net Emissions Increase for Phase I									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
100	Green Wood Production	9.33	3.39	1.15	5.82	0.0	0.0	0.0	0.0
300	Veneer Dryers Hot Zones	1.95	9.97	9.97	61.92	0.02	2.13	26.18	3,480
300	Veneer Dryers Cooling Zones	4.06	4.00	3.32	21.37	0.0	0.0	13.87	0.0
400	Glue Lines and Presses	0.85	0.29	0.29	57.43	0.0	0.0	0.0	0.0
	Dry Waste Transfer System	14.106	0.86	0.54	11.86	0.0	0.0	0.0	0.0
700	Specialty Machine System	0.41	0.30	0.0	10.81	0.0	0.0	0.0	0.0
600	Sander System	1.11	0.30	0.28	14.29	0.0	0.0	0.0	0.0
800	Boiler	1.8	5.7	5.5	12.88	3.25	34.09	-42.0	58,111
	Roads	0.5	0.0	0.0	0.0	0.0	0	0.0	0.0
	Ash Bins	0.05	0.02	0.00071	0.0	0.0	0	0.0	0.0
	PCWP Misc. Coatings	0.0	0.0.	0.0	10.79	0.0	0.0	0.0	0.0
	Total	34.16	24.8	21.05	207.17	3.27	36.23	-28.13	61,591
Debarker enclosure		-6.89	-3.79	-1.31	0.0	0.0	0.0	0.0	0.0
Shutdown of Veneer Dryer #1 (24-Section)		-7.88	-11.9	-11.9	-6.95	0.0	0.0	0.0	0.0

Table 1-9: Step 2 Project Net Emissions Increase for Phase I									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
Panel Oil (NOX Crete)		0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0
Removal of RF Oven		-0.05	-0.09	-0.09	-3.15	0.0	0.0	0.0	0.0
Removal of Lily Pad Chipper		-0.16	-0.08	-0.08	0.0	0.0	0.0	0.0	0.0
Rebuild of Glueline		0	0	0	-0.65	0	0	0	0
Total		**19.18**	**8.94**	**7.67**	**211.02**	**3.27**	**36.23**	**-28.13**	**61,591**
PSD Threshold		**25**	**15**	**10**	**40**	**40**	**40**	**100**	**75,000**
Triggers PSD?		**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**

Table 1-10: Step 2 Project Net Emissions Increase for Phase I + Phase II									
Source ID	**Description**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**VOC (tpy)**	**SO_2 (tpy)**	**NOx (tpy)**	**CO (tpy)**	**CO_2e (tpy)**
100	Green Wood Production	7.66	3.15	1.10	8.47	0.0	0.0	0.0	0.0
300	Veneer Dryers Hot Zones	3.09	15.78	15.78	63.54	0.02	2.19	26.85	3,993
300	Veneer Dryers Cooling Zones	7.95	7.85	6.50	21.92	0.0	0.0	14.22	0.0
400	Glue Lines and Presses	1.12	0.39	0.38	80.46	0.0	0.0.	0.0.	0.0
	Dry Waste Transfer System	14.18	0.912	0.67	16.64	0.0	0.0	0.0	0.0
700	Specialty Machine System	0.42	0.35	0.33	11.25	0.0	0.0	0.0	0.0
600	Sander System	1.11	0.34	0.28	14.84	0.0	0.0	0.0	0.0
800	Boiler	1.82	6.18	6.01	13.43	3.36	38.13	-41.8	59,596
	Roads	0.35	0.08	0.02	0.0	0.0	0.0	0.0	0.0
	Ash Bins	0.05	0.02	0.0	0.0	0.0	0.0	0.0	0.0
	PCWP Misc. Coatings	0.0	0.0	0.0	-3.10	0.0	0.0	0.0	0.0
	Total	37.75	35.05	31.07	227.45	3.38	40.32	-0.73	63,589
Debarker enclosure		-6.89	-3.79	-1.31	0.0	0.0	0.0	0.0	0.0
Shutdown of Veneer Dryer #1 (24-Section)		-7.88	-11.9	-11.9	-6.95	0.0	0.0	0.0	0.0
Panel Oil (NOX Crete)		0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0
Removal of RF Oven		-0.05	-0.09	-0.09	-3.15	0.0	0.0	0.0	0.0
Removal of Lily Pad Chipper		-0.16	-0.08	-0.08	0.0	0.0	0.0	0.0	0.0
Rebuild of Glueline		0	0	0	-0.65	0	0	0	0
Shutdown of Veneer Dryers #3 and #4		-8.35	-12.6	-11.37	-20.58	0.0	-1.46	0.0	0.0
		14.42	**6.59**	**6.32**	**210.72**	**3.38**	**38.86**	**-0.73**	**63,589**
PSD Threshold		**25**	**15**	**10**	**40**	**40**	**40**	**100**	**75,000**
Triggers PSD?		**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**

Georgia-Pacific's "Step 2 Analysis" is discussed on pages 3-6 through 3-7 and on pages 48 through 52 of Appendix B.

Conclusion of Review of PSD Applicability: The applicant presents the "Step 1" plus "Step 2" net emissions increase in Table 3-3 of the application. Georgia EPD utilized the data in Appendix B of the application and presents its findings in Tables 1-7 and 1-8. Georgia EPD and Georgia-Pacific's number do not exactly match. Note: Georgia EPD concurs with the applicant's findings except for CO emissions. It appears the applicant did not take into account the reduction in CO emissions from the boiler project while the applicant did take into account the reduction in NOx emissions from the boiler project.

As some of the emission factors used by Georgia-Pacific are from unapproved source testing, the net emissions increase for $PM_{2.5}$ may exceed 10 tpy if Georgia-Pacific emission factors used in Application No. 21174 are used for the veneer dryer cooling zones and presses. The applicant will be required to verify the emission factors used in this analysis by source testing which is further discussed in Section 5 of this narrative.

Based on the information presented in Tables 1-7 and 1-8 above, Georgia-Pacific's proposal, as specified per Application No. 22349, is classified as a major modification under PSD because the net emissions increase of VOC exceeds the PSD significant emissions rate thresholds.

Through its new source review procedure, Georgia EPD has evaluated Georgia-Pacific's proposal for compliance with State and Federal requirements. The findings of Georgia EPD have been assembled in this Preliminary Determination.

2.0 PROCESS DESCRIPTION

The facility has been in operation since 1979. The facility's operations were originally designed to support both a plywood plant and a lumber mill located on the site. The lumber mill was closed and dismantled prior to Georgia-Pacific acquiring the Madison plywood facility from Georgia Kraft in 1987.

Georgia-Pacific's permit application and supporting documentation are maintained as a separate document from this narrative and the application and supporting documents can be found online at www.georgiaair.org/airpermit.

Existing Process

Green Veneer Production, Source Group ID No. 100

Operations at the Madison Plywood facility begin with the delivery of logs to the storage area via trucks. Logs taken from the storage area or directly off the log trucks are fed to the slasher deck where they are cut to length. The slasher deck saws cut the raw logs to the desired length prior to being sent for subsequent processing. The logs then enter the debarkers (either ring debarker or drum debarker), to remove the bark from the logs. Logs from the ring debarkers are sent to the log vats for conditioning and logs from the drum debarker are sent to the whole log chipper where the log is reduced to chips. The bark generated in the debarking operations is mechanically conveyed to the bark hogs where it is sized before being conveyed to the fuel house for use as fuel in the wood-fired boiler (Emission Unit ID No. 800). The trimmed-off ends of the logs (a.k.a. lily pads) from the slasher deck are sent to the lily pad chipper where they are chipped for use as fuel in the boiler.

The existing log cut-up equipment is in the process of being dismantled/removed upon startup and commissioning of the new "log cut-up system." The new "log cut-up system" was permitted by Georgia EPD in 2012. The net emissions increase of the new "log cut-up system" is included in the PSD applicability analysis for the proposed project by the applicant.

The sized logs leaving the debarkers proceed to the soaking vats for conditioning. After soaking in the vats, the logs are mechanically conveyed to the other green end processes, which include lathes and veneer clippers. The lathes peel the logs into thin pieces of green veneer, which are then clipped to the desired size by the veneer clippers. The log core that remains after the veneer is peeled is either chipped in the core chipper or shipped off-site for subsequent processing. The veneer trimmings from the veneer clipper are chipped by the veneer chippers and the chips are conveyed to the shaker screen along with chips generated with other green end processing equipment. The chips from the shaker screen are pneumatically transferred to the green chip railcar loading or to the green chip truck loading for shipment off-site.

Veneer Dryers, Source Group ID No. 300
If the clipped green veneer is of high quality, it proceeds to the veneer dryers (Source Group ID No. 300). There are currently four dryers in Source Group ID No. 300 described as follows:

Dryer #	Description
1	24-Section and associated cooling vents
2	20-Section and associated cooling vents
3	16-Section and associated cooling vents
4	10-Section and associated cooling vents

The exhaust from the veneer dryers' "hot zones" stacks is controlled by a 4-canister Regenerative Thermal Oxidizer (RTO)/Regenerative Catalytic Oxidizer (RCO). Emissions associated with the "cooling zones" of the dryers are uncontrolled.

Lower quality veneer is cut into smaller strips by the fishtail saw or center cut saw (part of Source Group ID No. 100) before being dried. Wood residuals from the fishtail saw are collected in the dry waste transfer system and subsequently transferred for use as boiler fuel or shipped off-site. The higher quality veneer will form the faces of the plywood panel, while the smaller strips of veneer will form the core at the glue line.

The veneer dryers are heated indirectly using steam that is generated by a wood-fired boiler (Emission Unit ID No. 800).

Glue Line and Presses, Source Group ID No. 400)
The dried veneer proceeds to the glue line where resin (glue) is applied to the veneer sheet before core strips are applied. The veneer is applied in layers at the glueline with glue being applied after each subsequent layer of veneer is added. This process is repeated until the desired thickness is achieved.

After the desired thickness is achieved a flying saw makes a cut in the layed-up veneer. The wood residual generated at the flying saw is transferred to the dry waste transfer system. Additional wood residuals generated at the glue line are hogged in the dry waste hog and this material is pneumatically conveyed via the dry waste conveying system to be used as boiler fuel or to the dry waste truck bin for shipping off-site. The unpressed plywood panel then proceeds to the pre-presses and presses. In the presses, the combination of heat and pressure cures the glue and forms the plywood panel. After the presses, the panels are trimmed by the panel saw and trimmed material is hogged in the finishing hog and this material is collected in the dry waste conveying system to be used as boiler fuel or to the dry waste truck bin for shipping off-site.

Saw and Sanding Operations (Source Group ID Nos. 600 and 700)
Sawed panels then proceed to the patch line, the specialty saw/sander, the main sander, or the cut to size operation for finishing prior to being packaged for shipment off-site. The wood residuals generated by the finishing operations are pneumatically conveyed to the boiler to be used as fuel or shipped off-site. From the finishing operations, some of the plywood panels may be sent for edge sealing, addition of a water repellant coating, or for form oil application. Finished bundles of panels are stenciled with the Georgia-Pacific logo. The plywood panels are then shipped off-site via truck or rail.

Boiler
Georgia-Pacific operates a 355 MMBtu/hr boiler (EU800) that fires bark and wood residuals generated from the production process as the primary fuel source. Secondary fuels include small amounts of used oil added directly to the bark and liquefied petroleum gas used for the boiler's pilot light. Georgia-Pacific will add natural gas as a startup fuel for this boiler. The boiler exhausts to a multiclone followed by an electrostatic precipitator. The boiler provides steam for the log vats, veneer dryers, and presses. Georgia-Pacific requests authorization to construct and operate a selective non-catalytic reduction (SNCR) system to control emissions from this boiler if the combustion improvements do not decrease the NOx emission rate to the targeted NOx emission rate needed for PSD avoidance.

Ancillary Equipment
There are a number of activities that support the main operation of the facility. These include storage tanks for resins and oils, facility roads, and engines used for emergency equipment.

Proposed Modification

Phase I of Project
Enclose debarker which is part of Source Group ID No. 100.
Remove from site the existing 24-Section Veneer Dryer #1 and associated cooling vents.
Add new 23-Section Veneer Dryer #1 and associated cooling vents. The dryer hot zones are to exhaust through the existing VOC control device with ID No. TCO.
Replacement of dryer tubes on the 20-section dryer (ID No. 302).
Add new glue line to Source Group ID No. 400.
Upgrade and automate existing glue line in Source Group ID No. 400.
Upgrade existing presses in Source Group ID No. 400.
Modify the existing Biomass Boiler (Emission Unit ID No. 800) to handle the needed increase in steam load.
Upgrade the combustion air system (both overfired air and under grate air) and replace the sander dust and natural gas burners in the existing biomass boiler (Emission Unit ID No. 800).
Upgrade Source Group ID No. 100 as described in Application No. 21468.
Modify dry waste transfer system (PFS) by replacing trim saw (Emission Unit ID No. 501).
Add a backup dust collection system servicing the glue line flying saw and core saw.

Phase II of Project
The existing 20-Section Veneer Dryer #2 and associated cooling vents is to be rebuilt as a 10-Section Veneer Dryer #2 and associated cooling vents or replace this existing dryer with a new dryer. The dryer hot zones are to exhaust through the existing VOC control device with ID No. TCO. Georgia-Pacific may install a new 10-Section Veneer Dryer #2 and associated cooling vents instead of rebuilding the existing 20-Section Veneer Dryer #2 and associated cooling vents. Add new 18-Section Veneer Dryer and associated cooling vents. The dryer hot zones are to exhaust through the existing VOC control device with ID No. TCO. Remove from service the existing 16-Section Veneer Dryer #3 and associated cooling vents. Remove from service the existing 10-Section Veneer Dryer #4 and associated cooling vents. Add new press to Source Group ID No. 400. Modify dry waste transfer system (PF2) by adding a flying saw.

3.0 REVIEW OF APPLICABLE RULES AND REGULATIONS

State Rules

Georgia-Pacific's Title V Permits contain the applicable state rules which will continue to be applicable including the following:

Georgia Rule for Air Quality Control (Georgia Rule) 391-3-1-.03(1), Construction Permit, requires that any person prior to beginning the construction or modification of any facility which may result in an increase in air pollution shall obtain a permit for the construction or modification of such facility from the Director upon a determination by the Director that the facility can reasonably be expected to comply with all the provisions of the Act and the rules and regulations promulgated there under. Georgia Rule 391-3-1-.03(8)(b) continues that no permit to construct a new stationary source or modify an existing stationary source shall be issued unless such proposed source meets all the requirements for review and for obtaining a permit prescribed in Title I, Part C of the Federal Act [i.e., Prevention of Significant Deterioration of Air Quality (PSD)], and Section 391-3-1-.02(7) of the Georgia Rules (i.e., PSD).

Georgia Rule 391-3-1-.02(2)(b) Visible Emissions, limits the opacity of visible emissions from any air contaminant source, which is subject to some other emission limitation under 391-3-1-.02(2). The opacity of visible emissions from regulated sources may not exceed 40 percent under this general visible emission standard. The proposed modification involves confidential changes to confidential existing units that are subject to Georgia Rule (b). The proposed modification will be required to comply with Georgia Rule (b) as before the modification. The new dryers and press will be subject to Georgia Rule (b).

Georgia Rule 391-3-1-.02(2)(d) Fuel-burning Equipment limits emission of fly ash and/or particulate matter as well as opacity when burning any fuel. Boiler (Emission Unit ID No. 800) will be permitted to burn green wood residuals (bark, sawdust, etc.) and dry wood residuals as the primary fuel source along with small amounts of used oil (added directly to the bark), liquefied petroleum gas issued for the pilot light, and natural gas (in amounts up to 10% of the total heat input on an annual basis).

Fuel Type	Maximum Fuel Input per Hour	Total PM emissions[3] (lb/MMBtu)
Green wood residuals Dry Wood residuals	319.5 up to 355 MMBtu/hr	0.10
Used Oil	Unknown	Unknown
Natural gas	35.5 MMBtu/hr	0.26
All Fuel Types	355 MMBtu/hr	For PSD Applicability = 0.021 lb/MMBtu (total) For NSPS Db = 0.085 lb/MMBtu

Georgia EPD investigated whether the requirements of Georgia Rule 391-3-1-.02(2)(d)(4)(iii) [i.e., NOx emission limit] applied since the applicant will fire natural gas (less than 10% annual capacity factor) and used oil (less than 10% annual capacity factor). Georgia EPD did not impose the NOx emission limit in the Synthetic Minor Permit for Piedmont Green Power, LLC (AIRS #: 171-00014) which received an air permit to construct and operate a very large biomass boiler (with natural gas for startup and flame stabilization).

In this case, Georgia EPD will not impose the NOx emission limit for Georgia-Pacific's biomass boiler because green and dry wood residuals make up the primary fuel for the boiler.

No new equipment will be subject to this state rule.

Georgia Rule 391-3-1-.02(2)(e) Particulate Matter Emission from Manufacturing Processes limits particulate matter from each emission unit identified in Permit No. 2436-211-0013-V-03-0. The new dryers and press will be subject to Georgia Rule (b).

Georgia Rule 391-3-1-.02(2)(g) Sulfur Dioxide limits the fuel sulfur content of fuel combusted in the fuel-burning equipment at Georgia-Pacific. Georgia-Pacific is correct in asserting that Georgia Rule 391-3-1-.02(2)(g)1. is not applicable because the boiler (Emission Unit ID No. 800) does not fire fossil fuels at a rate exceeding 250 MMBtu/hr. Georgia Rule 391-3-1-.02(2)(g)2. specifies a fuel sulfur content of 3 percent by weight or less and this limit does apply.

The primary fuel combusted by the boiler (Emission Unit ID No. 800) is green and dry wood residuals which have a negligible sulfur content. Therefore, no PSD Avoidance limit is needed for fuel sulfur content even though the applicable state rule allows potential sulfur dioxide emissions to exceed 40 tons per year.

No new requirements are imposed by this state rule on the proposed project.

PSD Avoidance: Georgia EPD evaluated the applicant's PSD applicability analysis in order to determine if any PSD Avoidance emissions limit were necessary.

PM, PM_{10} and $PM_{2.5}$ Emissions: The project did not trigger PSD review for PM, PM_{10}, or $PM_{2.5}$ emissions. As some of the emission factors used by Georgia-Pacific are from unapproved source testing, the net emissions increase for $PM_{2.5}$ may exceed 10 tpy if Georgia-Pacific's emission factors from Application No. 21174 are used for the veneer dryer cooling zones and presses. The applicant will be required to verify the emission factors used in this analysis by source testing which is further discussed in Section 5 of this narrative.

[3] Georgia Rule 391-3-1-.02(2)(d) regulates total PM (filterable plus condensible)

SO_2 and GHG Emissions: The facility emits minor amounts of SO_2 and little to no increase is expected from the proposed project. The applicant included carbon dioxide emissions in its estimate of GHG Emissions (CO_2e) and the net emissions increase for GHG emissions is well below 75,000 tpy. No control of GHG emissions is needed to maintain the net emissions increase for GHG emissions below 75,000 tpy. Georgia EPD does not recommend any PSD avoidance limits for emissions of SO_2 and GHG's.

CO Emissions: Georgia-Pacific avoids PSD review for CO emissions from the project because of the steps to be taken by the applicant to comply with the applicable CO emissions limit established by Part 63 Subpart DDDDD and effective January 31, 2016 (i.e., 2,800 ppmvd @ 3% oxygen, 1.962 lb/MMBtu). The baseline actual CO emissions are computed using an emission factor of 2.86 lb/MMBtu. The projected future actual CO emissions are computed using an emission factor of 1.962 lb/MMBtu.

The baseline actual CO emissions that could be accommodated during the baseline were computed to be approximately 1,910.61 tpy. Georgia EPD determined that as long as CO emissions remain below 2.05 lb/MMBtu[4] after the project, the project would not trigger PSD review. Georgia EPD recommends the establishment of a short-term CO PSD Avoidance emission limit of 2.05 lb/MMBtu, 3 hour average, for the biomass boiler.

NOx Emissions: The baseline actual NOx emissions are computed using an emission factor of 0.185 lb/MMBtu. The projected future actual NOx emissions are computed using an emission factor of 0.170 lb/MMBtu. The lower NOx emission factor provides for PSD Avoidance for NOx emissions from the project. Georgia-Pacific requested a PSD Avoidance limit for NOx emissions in tons per year. In this case, this limit would equate to:

NOx (tpy) = (0.170 lb/MMBtu)*(1,904,780 MMBtu/yr)*(1 ton/2000 lb) = 161.9 tpy

Federal Rules

New Source Performance Standards

40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units applies to a steam generating unit for which construction, modification, or reconstruction is commenced after June 19, 1984 and that has a maximum design heat input capacity greater than 100 MMBtu/hr of 20 megawatts (MW) (100 MMBtu/hr). The boiler at Georgia–Pacific has a capacity of 355 MMBtu/hr and was constructed in November 1979. The boiler has not been modified or reconstructed since installation. Therefore, the boiler is not currently subject to NSPS Db.

The applicant presented an NSPS Db applicability analysis on pages 4-2 through 4-3 of the application. The NSPS regulation defines "modification" as any physical change in, or the change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Georgia EPD assessed whether there would be an increase in emissions (lb/hr) from the boiler project and the following data is taken from Appendix B page 36:

[4] CO(lb/MMBtu) = (1,910.61 tpy + 100 tpy -58.93 tpy)*(yr/1,904,780 MMBtu)*(2000 lb/ton)=2.05 lb/MMBtu

Pollutant Regulated by NSPS Db	Emissions Before Project[5] (lb/hr)	Emissions After Project[6] (lb/hr)
SO_2	0.56	1.64
PM (assuming total)	0.825	1.49
NOx	46.25	60.35

Based on data specified in the table above, the boiler project will result in an increase in the short-term emissions of SO_2, PM and NOx.

Georgia-Pacific classifies the used oil combusted in the boiler as an "oil" fuel applicable to NSPS Db emission requirements. NSPS Db defines "oil" as crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil. Georgia EPD will assume that the "used oil" fired by Georgia-Pacific is derived from petroleum and is therefore an applicable NSPS Db fuel.

NSPS Citation	Description	Notes
60.42b	Standard for sulfur dioxide Burns primarily biomass but will burn some natural gas for startup, shutdown, and flame stability. Boiler also burns a small amount of used oil	60.42b(k)(2): Facility qualifies for SO_2 emission standard exemption.
60.43b	Standard for particulate matter	60.43b(f): Shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. 60.43b(h)(4): PM limit of 0.085 lb/MMBtu as the unit will combust over 30% wood (by heat input on an annual basis) and has a maximum heat input capacity greater than 250 MMBtu/hr. Assuming this limit for filterable PM only.

[5] Emissions computed based on 250 MMBtu/hr maximum heat input for the boiler and applicable emission factors found in Appendix B of the application.

[6] Emissions computed based on 355 MMBtu/hr maximum heat input for the boiler. NOx emissions based on 0.17 lb/MMBtu rather than 0.34 lb/MMBtu as used by Georgia-Pacific.

NSPS Citation	Description	Notes
60.44b	Standard for nitrogen oxides	60.44b(c): The NOx std set forth for boilers firing biomass with natural gas or distillate oil do not apply to an affected facility that has a federally enforceable requirement that limits operation of the boiler to an annual capacity factor of 10 percent or less for fossil fuels. The applicant will take a 10 percent limit for combustion of fossil fuel in the boiler.
60.45b	Compliance and performance test methods and procedures for sulfur dioxide	Not applicable
60.46b	Compliance and performance test methods and procedures for particulate matter and nitrogen oxides	60.46b(d) – Conduct an initial performance test to determine compliance with the PM emission limit and the opacity limit.
60.47b	Emission monitoring for sulfur dioxide	Not applicable.
60.48b	Emission monitoring for particulate matter and nitrogen oxides	60.48b(a) – install and operate a COMS for opacity.
60.49b	Reporting and Recordkeeping Requirements	60.49b(a) – initial notification 60.49b(b) – submit to EPA the PM performance test data. 60.49b(d)(1) – record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for each fuel type. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. 60.49b(f) Maintain records of opacity. 60.49b(h) – submit excess emission reports for opacity, as applicable. 60.49b(r): Maintain fuel records to demonstrate that the facility combusts only natural gas and very low sulfur oil in combination with wood, and to demonstrate that the oil meets the definition of very low sulfur oil (0.5%).

National Emissions Standards for Hazardous Air Pollutants

40 CFR 63 Subpart DDDD – National Emission Standard for Plywood and Composite Wood Products (PCWP) applies to the entire Madison plant plywood production operation which constitutes one affected source under this NESHAP. No new NESHAP requirements are triggered by this project. The existing NESHAP requirements found in Permit No. 2436-211-0013-V-03-0 for Georgia-Pacific apply:

NESHAP Citation	Applicable Equipment	NESHAP Requirements
40 CFR 63.2250(a) Table 1B	Veneer Dryers	Achieve a minimum destruction efficiency for the captured total HAP emissions, as measured as THC (as carbon), of 90% for the existing RTO/RCO.
Table 3 – No. 3		Comply with the Work Practice requirements by minimizing fugitive emissions from the veneer dryer doors (through proper maintenance procedures) and from the green end of the veneer dryers through proper balancing of the heated zone exhausts.
40 CFR 63.2241(a) No. 5 in Table 6	Group 1 Miscellaneous Coating Operations	Use non-HAP coatings as defined in 40 CFR 63.2292. HAP content in such coatings shall be less than 0.1 percent by mass for OSHA carcinogens as specified in 29 CFR 1910.1200(d)(4), and less than 1.0 percent by mass for other HAP compounds.

40 CFR 63 Subpart DDDDD – National Emission Standard for Major Sources: Industrial, Commercial, and Institutional Boilers. This regulation applies to existing boilers with emission unit ID No. 800. Table 3-1 provides a description and Boiler MACT notes.

Table 3-1 Boiler MACT Requirements for Boiler 800	
Existing Unit Requirements Citation	**Requirements for Emission Unit ID No. 800**
40 CFR 63.7490 – What is the affected source of this subpart?	63.7490(a) Boiler 800 is an existing ICI boiler at a major source.
40 CFR 63.7495 – When do I have to comply with this subpart?	63.7495(b) – As an existing unit, the facility must comply no later than January 31, 2016.
40 CFR 63.7499 – Subcategory	63.7499(h) – Boiler meets the definition of a *hybrid suspension/grate burner designed to burn wet biomass/bio-based solids.*
40 CFR 63.7500 – Applicable Emission limitations	**Table 2 – Applicable – Item 13** (a)(1)Table 2 for Category 13 CO must not equal or exceed except during SSM: 2800 ppmvd corrected to 3% oxygen using a 3 run average Or output values found on page 78

Table 3-1 Boiler MACT Requirements for Boiler 800	
Existing Unit Requirements Citation	**Requirements for Emission Unit ID No. 800**
	Filterable PM = 0.44 lb/MMBtu heat input Or TSM = 0.00045 lb/MMBtu heat input where TSM means total selected metals Table 3 item 3-annual tune-up for dioxins/furans Table 3 item 4-one time energy assessment performed
Work practice standards	Table 3 item 5 for startup – must engage all control devices –
	(a)(2)Table 4 for ESP use without a wet scrubber. Existing boiler must maintain opacity to less than or equal to 10 percent opacity (daily block average)
Operating limits	(a)(3) Good air pollution control practice clause
40 CFR 63.7505 – General Requirements for Compliance	63.7505(c): Facility must demonstrate compliance with all applicable emission limits using: Performance stack testing; or Fuel analysis; or Continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system, where applicable. 63.7505(d): Develop a site-specific monitoring plan according to the requirements in 63.7505(d)1) through (d)4) for the use of any CEMS, COMS, or CPMS.

The draft permit will contain conditions specifying the applicable emission limits with the effective date. In addition, a condition is included which requires the applicant to submit a control strategy at least 6 months prior to effective date.

Prevention of Significant Deterioration (40 CFR 52.21)

Applicability: The regulations for PSD in 40 CFR 52.21 require that any new major source or modification of an existing major source be reviewed to determine the potential emissions of all *regulated NSR pollutants.* The PSD review requirements apply to any new or modified source which belongs to one of 28 specific source categories having potential emissions of 100 tons per year or more of any regulated pollutant, or to all other sources having potential emissions of 250 tons per year or more of any *regulated NSR pollutant*, excluding greenhouse gas (GHG) emissions (expressed as CO_2e). The PSD threshold for any new or modification source for GHG emissions is 100,000 tpy of CO_2e[7]. They also apply to any modification of a major stationary source which results in a significant net emission increase of any *regulated NSR pollutant*.

[7] The term GHG emissions includes: (1) Carbon dioxide, (2) Methane, (3) Nitrous oxide, (4) hydrofluorocarbons, (5) perfluorocarbons, and (6) sulfur hexafluoride. The term CO_2e is a function of the particular GHG global warming potential.

Georgia EPD has adopted a regulatory program for PSD permits, which the United States Environmental Protection Agency (EPA) has approved as part of Georgia's State Implementation Plan (SIP). This regulatory program is located in the Georgia Rules at 391-3-1-.02(7). This means that Georgia EPD issues PSD permits for new major sources or major modifications pursuant to the requirements of Georgia's regulations. It also means that Georgia EPD considers, but is not legally bound to accept, EPA comments or guidance. A commonly used source of EPA guidance on PSD permitting is EPA's Draft October 1990 New Source Review Workshop Manual for Prevention of Significant Deterioration and Nonattainment Area Permitting (NSR Workshop Manual). The NSR Workshop Manual is a comprehensive guidance document on the entire PSD permitting process.

The PSD regulations require that any major stationary source or major modification subject to the regulations meet the following requirements:

- Application of "Best Available Control Technology" (BACT) for each "regulated NSR pollutant" (including GHG emissions) that would be emitted in significant amounts;
- Analysis of the ambient air impact for *regulated NSR pollutants* excluding GHG emissions;
- Analysis of the impact on soils, vegetation, and visibility for *regulated NSR pollutants* excluding GHG emissions;
- Analysis of the impact on Class I areas for *regulated NSR pollutants* excluding GHG emissions; and
- Public notification of the proposed plant in a newspaper of general circulation

Definition of BACT: The PSD regulation requires that BACT be applied to all regulated air pollutants emitted in significant amounts. Section 169 of the Clean Air Act defines BACT as

> *an emission limitation reflecting the maximum degree of reduction that the permitting authority (in this case, EPD), on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such a facility through application of production processes and available methods, systems, and techniques. In all cases BACT must establish emission limitations or specific design characteristics at least as stringent as applicable New Source Performance Standards (NSPS). In addition, if the Division determines that there is no economically reasonable or technologically feasible way to measure the emissions, and hence to impose and enforceable emissions standard, it may require the source to use a design, equipment, work practice or operations standard or combination thereof, to reduce emissions of the pollutant to the maximum extent practicable.*

EPA's NSR Workshop Manual includes guidance on the 5-step top-down process for determining BACT. In general, the Division requires PSD permit applicants to use the top-down process in the BACT analysis, which EPA reviews. The five steps of a top-down BACT review procedure identified by EPA per BACT guidelines are listed below:

Step 1: Identification of all control technologies;
Step 2: Elimination of technically infeasible options;
Step 3: Ranking of remaining control technologies by control effectiveness;
Step 4: Evaluation of the most effective controls and documentation of results; and
Step 5: Selection of BACT.

State PSD Rule – Georgia Rule 391-3-1-.02(7)15.: Georgia EPD has amended EPA's "reasonable possibility" rules outlined under 40 CFR 52.21(r)(6) in Georgia Rule 391-3-1-.02(7)15.(i). Georgia Rule 391-3-1-.02(7)15.(i) states that for projects at an existing emissions unit at a major stationary source that are required to obtain a construction permit, and where the owner or operator elects to use the "baseline actual-to-projected" applicability test in 40 CFR 52.21(b)(41)(ii)(a) through (c), then in lieu of EPA's "reasonable possibility" rules, an applicant must comply with the provisions specified under Georgia Rule 391-3-1-.02(7)(b)15.(i). These provisions require maintaining records for projects that require a state construction permit and use the "baseline actual-to-projected actual" applicability test for a period of 15 years following the project implementation. The proposed project used the "baseline-actual-to-projected actual" applicability test for emission units noted in Table 1-5 for affected emission units. The application serves as the record required, in this case, by Georgia Rules 391-3-1-.02(7)15.(i)(I) and 391-3-1-.02(7)15.(i)(II).

The requirements of Georgia Rule 391-3-1-.02(7)(b)15.(i)(III) are triggered because the proposed project will change the design capacity of the facility. Therefore, Georgia-Pacific will calculate and maintain a record of annual emissions, in tons per year, on a calendar year basis, for a period of 10 years after project implementation. The annual emission records, for each *regulated NSR pollutant*, for Source Groups 100, 300, 400, 500, 600, 700 and for the boiler with Source Code 800 will be calculated and maintained by Georgia-Pacific.

The requirements of Georgia Rules 391-3-1-.02(7)(b)(15)(i)(IV) and (V) are triggered because the applicant excluded demand growth from the projected actual emissions for the following emission units:

Table 3-2: Affected Emission Units that Require Demand Growth Record Keeping

Emission Unit ID No.	Emission Unit Description	Comment(s)	Demand Growth Excluded (tpy)
EU100	Log Trimmer System	Affected emission unit	PM= 1.88 – 1.69 = 0.19 PM_{10} = 0.68-0.61 = 0.07 $PM_{2.5}$ = 0.36-0.32=0.04
EU107	Bark Hog/Fuel House	Affected emission unit	PM=1.22-1.09=0.13 PM_{10} = 0.051-0.048=0.003 $PM_{2.5}$ = 0.0071-0.0064 = 0.0005
EU101, EU103, and EU104	Whole Log Chippers, Core Chippers, and Veneer Chippers	Affected emission unit	PM=0.080-0.071 = 0.009 PM_{10} = 0.038-0.031 = 0.007 $PM_{2.5}$ = 0.0057-0.0051 = 0.0006
EU105 and EU106	Shaker Screen Overs and Rechippers	Affected emission unit	PM=0.080-0.071 = 0.009 PM_{10} = 0.038-0.031=0.007 $PM_{2.5}$ = 0.0057-0.0051 = 0.0006
WC1, WC2, and WC4	Chip Conveying System Chip Loading Truck Chip Loading Railcar	Affected emission unit	PM=2.93-2.87=0.06 PM_{10} = 0.088-0.084=0.004 $PM_{2.5}$ = 0.0157-0.0151=0.0006

Georgia-Pacific shall calculate the actual increase in emissions due to demand growth, in tons per year, on a calendar year basis, for a period of 10 years following resumption of regular operation after the change. These records shall be retained for a period of five years past the end of each calendar year. Georgia-Pacific will submit a report to the Division within 60 days after the end of each year, for a period of ten years after project implementation, as required under Georgia Rules 391-3-1-.02(7)(b)15.(i)(III) and (IV).

State and Federal – Startup and Shutdown and Excess Emissions

Startup and shutdown emissions are regulated in this project as denoted in the following table:

Source Group	Notes
Green Veneer Production	No new emission limits are imposed.
Veneer Dryers	Hot Zones: VOC BACT emissions limit (tpy) includes emissions occurring during startup, shutdown, and malfunction. Cooling Zones: VOC BACT emissions limit (tpy) includes emissions occurring during startup, shutdown, and malfunction.
Glue Line and Presses	Press Source Group: VOC BACT emissions limit (tpy) includes emissions occurring during startup, shutdown, and malfunction. Glue Lines: VOC BACT limit is established as a VOC content limit.
Dry Waste Systems	No new emission limits are imposed.
Sander System	No new emission limits are imposed.
Specialty Saw System	No new emission limits are imposed
Boiler	VOC BACT emissions limit (lb/MMBtu) excludes periods of startup and shutdown. VOC BACT emissions limit (tpy) includes periods of startup, shutdown, and malfunction. PSD Avoidance limit (tpy) for NOx includes periods of startup and shutdown. PSD Avoidance limit (lb/MMBtu) for CO does not include periods of startup and shutdown. NSPS Db filterable PM limit (lb/MMBtu) and opacity limit do not apply during periods of startup, shutdown, or malfunction per the NSPS.

4.0 CONTROL TECHNOLOGY REVIEW

The Division analyzed the proposed modification to determine what portions of the proposed project were subject to BACT. The result of the Division's analysis is specified in the following table:

Equipment	Physical Change or Change in the Method of Operation?	Subject to BACT?	Equipment	Physical Change or Change in the Method of Operation?	Subject to BACT?
EU100 Green Veneer Production	No physical change or change in the method of operation. Will experience an increase throughput	No	EU500 Finisher EU600 Sander EU700 Specialty Saw/Sander	No physical change or change in the method of operation. New Construction of backup dust	No because no new emission units are to be constructed. Permittee to construct back-up control system.

Equipment	Physical Change or Change in the Method of Operation?	Subject to BACT?	Equipment	Physical Change or Change in the Method of Operation?	Subject to BACT?
				collection system serving the glue line flying saw and core saw. Will experience an increase throughput	
EU300 Four Veneer Dryers	3 dryers will be shutdown 2 larger dryers will be constructed and 1 existing dryer will be rebuilt ore replaced.	Yes	EU800 Boiler	Physical Components removed to increase capacity factor of boiler. Some burners will be replaced.	Yes
EU400 Glue Lines Presses	1 new glue line 1 rebuilt glue line 1 new press 3 existing presses with replaced hydraulics	Yes Yes Yes Yes	Contemporaneous Changes		No

Veneer Dryers

Georgia-Pacific currently operates 4 soft-wood veneer dryers. Georgia-Pacific proposes to replace the Nos. 1 and 3 Dryers with two new larger dryers and rebuild or replace the No. 2 Dryer. The No. 4 Dryer will be removed. The three new/rebuilt dryers will be more efficient than the four existing dryers and will be able to accommodate a higher veneer production rate. The veneer dryer source group will be modified as specified in the following table:

Dryer #	Existing Description	Description Upon Completion of Proposed Project
1	24-Section and associated cooling vents	Existing Dryer is removed from site. New 23-Section and associated cooling vents.
2	20-Section and associated cooling vents	Rebuild existing dryer as a 10-Section dryer and associated cooling vents. Georgia-Pacific may not rebuild but replace with a new 10-Section dryer and associated cooling vents.
3	16-Section and associated cooling vents	Existing Dryer is removed from site. New 18-Section and associated cooling vents.

Dryer #	Existing Description	Description Upon Completion of Proposed Project
4	10-Section and associated cooling vents	Existing Dryer is removed from site

Volatile Organic Compounds

Top-Down BACT Alternatives: The applicant identified and performed detailed discussion of the following VOC control technology for the veneer dryers (hot zones and cooling zones).

- Recuperative Thermal Oxidizers with a total enclosure for dryers,
- Regenerative Catalytic Oxidation (RCO) with a total enclosure for dryers,
- Regenerative Thermal Oxidation (RTO) with a total enclosure for dryers, and
- Biofiltration with a total enclosure for dryers.

Please refer to pages 5-5 through 5-8 of the application for a further review of the applicant's step 1 (Top-Down BACT Alternatives). The Division supports the applicant's findings.

Technical Feasibility Analysis: The applicant specified the following VOC control technologies as technically feasible:

- Regenerative Catalytic Oxidation (RCO) with a total enclosure for dryers,
- Regenerative Thermal Oxidation (RTO) with a total enclosure for dryers, and
- Biofiltration with a total enclosure for dryers.

Please refer to page 5-8 of the application for a further review of the applicant's step 2 BACT analysis. The Division supports the applicant's findings.

Ranking the Technically Feasible Alternatives: Application No. 22349 presents this analysis on page 5-8. The applicant ranked the VOC control technologies as follows:

- Regenerative Thermal Oxidation (RTO) with total enclosure for dryers = 95 percent,
- Regenerative Catalytic Oxidation (RCO) with total enclosure for dryers = 90 percent, and
- Biofiltration (for cool zones only) with total enclosure for dryers = 40 percent.

The Division concurs with the applicant's findings.

Energy, Environmental and Economic Analysis: Georgia-Pacific proposes to control the new veneer dryers hot zones using the existing RTO/RCO hybrid unit. The existing RTO/RCO hybrid unit cannot accommodate the cool zones exhaust gases due to the high exhaust flow rates. After the installation of the new dryers and the rebuild or replacement of the No. 2 dryer, the RTO/RCO hybrid unit will be operating at its maximum exhaust flow capacity

The applicant's energy, environmental and economic analysis is found on pages 5-8 through 5-10. The results of the applicant's findings are presented in the following table:

Dryer Hot Zones

Option	Control Device	VOC Controlled Emissions (tpy)	Cost Effectiveness ($ controlled/ton of VOC reduced)
Base Case – PCWP NESHAP	90% control of HAPs. Assume this correlates to 90% control of VOC emissions GP proposes to use existing RTO/RCO hybrid system	Projected Actual = 63.54 PTE = 82.5	Base Case

Dryer Cool Zones

Option	Control Device	VOC Controlled Emissions (tpy)	Cost Effectiveness ($ controlled/ton of VOC reduced)
Base Case – PCWP NESHAP Proposed by applicant	Comply with Work Practice Stds of No. 3 in Table 3 of the PCWP MACT. Assume this correlates to minimization of VOC emissions	0.08 lb/Msf (3/8" basis) as BACT VOC BACT = 21.9 tpy Projected Actual = 21.9 tpy PTE = 21.9 tpy	Base Case
Option 1	Total enclosure plus biofiltration with total VOC control efficiency = 40%	13.2	$205,790
Option 2	Total enclosure plus RCO with total VOC control efficiency = 90%	2.2	$306,893
Option 3	Total enclosure plus RTO with total VOC control efficiency = 90%	0.1	$317,274

The applicant presented an environmental and energy impact analyses in Table 5-6 of the application.

The Division concurs with the applicant's findings in step 4 of the BACT analysis.

VOC BACT Emission Standard Analysis: Georgia-Pacific proposed a VOC BACT limit of:

- Hot zones: 82.5 tpy (determined using the wood products protocol, WPP1) and a total VOC control efficiency of 90% using existing RTO/RCO hybrid system

- Cool zones: 0.08 lb VOC/Msf (3/8" basis) and 21.9 tpy and operating uncontrolled but in accordance with PCWP work practice standards.

Georgia-Pacific proposes to verify compliance with the proposed BACT using the following techniques:

- Verify compliance with the short-term VOC BACT limit using stack testing at least once every two years.
- Verify compliance with the control efficiency through stack testing at least once every two years.
- Verify compliance with the annual mass emissions rate using the Wood Products Protocol (WWP1)

EPD VOC BACT Selection: The following data is taken from page 5-7 and Appendix B of the application.

Option	Comparison Data	Georgia-Pacific Notes
Florien Plywood Plant for Boise Cascade Wood Products, LLC (2012 determination) (RBLC ID LA-0259) Hot Zones	0.2 lb/Msf 276.92 lb/hr for four dryers 44.44 tpy Use of existing RTO/RCO hybrid system	<u>Existing Dryer Hot Zones (Dryers to be shutdown) PSD applicability values</u> 0.14 lb/Msf (3/8" basis) (See Note 1) 7.02 lb/hr (See Note 1) 95.3% total VOC control using existing RTO/RCO hybrid system <u>New Dryer Hot Zones PSD applicability values</u> 0.14 lb/Msf (3/8" basis) (See Note 1) 7.02 lb/hr (See Note 1) 95.3% total VOC control using existing RTO/RCO hybrid system

Note 1: From page B-49 for Baseline Actual Emissions
VOC = (2.99 lb/Msf)*(1-0.953) = 0.14 lb/Msf
VOC = (25.9 tons/yr)*(2000 lb/ton)*(1 yr/7,384 hrs) = 7.02 lb/hr

Note 2: From page B-24 for Projected Actual Emissions
VOC = (2.99 lb/Msf)*(551,200 Msf/yr)*(1 ton/2000 lb)*(1-0.923) = 63.5 tpy
VOC = (63.5 tons/yr)*(2000 lb/1 ton)*(8760 hr/yr) = 14.59 lb/hr
VOC = (2.99 lb/Msf)*(1-0.923) = 0.21 lb/Msf

Conclusion
Georgia EPD sets the VOC BACT for the Veneer Dryers as follows:

Dryer Component	VOC BACT	Compliance Determination Method
Hot Zones	82.5 tons during any twelve consecutive months Minimum 90% overall removal efficiency	Record keeping and source testing Source testing
Cooling Zones	21.9 tons during any twelve consecutive months	Source testing Record keeping and source testing

These BACT standards become effective upon initial startup of New Dryer #1.

Plywood Presses

Georgia-Pacific currently operates 3 plywood presses. Georgia-Pacific proposes to replace the hydraulics on the existing 3 plywood presses and add a new plywood press.

Volatile Organic Compounds

Top-Down BACT Alternatives: The applicant identified and performed detailed discussion of the following VOC control technology for the plywood presses.

- Regenerative Catalytic Oxidation (RCO) with a total enclosure for dryers,
- Regenerative Thermal Oxidation (RTO) with a total enclosure for dryers, and
- Biofiltration with a total enclosure for dryers.

Please refer to pages 5-11 through 5-12 of the application for a further review of the applicant's step 1 (Top-Down BACT Alternatives). The Division supports the applicant's findings.

Technical Feasibility Analysis: The applicant specified the following VOC control technologies as technically feasible:

- Regenerative Catalytic Oxidation (RCO) with a total enclosure for dryers,
- Regenerative Thermal Oxidation (RTO) with a total enclosure for dryers, and
- Biofiltration with a total enclosure for dryers.

Please refer to page 5-12 of the application for a further review of the applicant's step 2 BACT analysis. The Division supports the applicant's findings.

Ranking the Technically Feasible Alternatives: Application No. 22349 presents this analysis on page 5-8. The applicant ranked the VOC control technologies as follows:

- Regenerative Thermal Oxidation (RTO) with total enclosure for dryers = 95 percent,
- Regenerative Catalytic Oxidation (RCO) with total enclosure for dryers = 90 percent, and

- Biofiltration (for cool zones only) with total enclosure for dryers = 40 percent.

The Division concurs with the applicant's findings.

Energy, Environmental and Economic Analysis: The applicant's energy, environmental and economic analysis is found on pages 5-12 through 5-14. The results of the applicant's findings are presented in the following table:

Option	Control Device	VOC Controlled Emissions	Cost Effectiveness ($ controlled/ton of VOC reduced)
Base Case – PCWP NESHAP For four presses	No emission standards or work practice standards	Projected Actual = 242.9 tpy PTE = 242.9 tpy PTE = 58.8 lb/hr	Base Case
Option 1	Biofiltration with total enclosure with total VOC control efficiency of 40%	145.5 tpy	$18,043
Option 2	Catalytic Oxidation and total enclosure with total VOC control efficiency of 90%	24.2 tpy	$15,983
Option 3	Thermal Oxidation and total enclosure with total VOC control efficiency of 95%	12.1 tpy	$16,322

The applicant presented an environmental and energy impact analyses in Table 5-12 of the application.

The Division concurs with the applicant's findings in step 4 of the BACT analysis.

VOC BACT Emission Standard Analysis: Georgia-Pacific proposed a VOC BACT limit of:

- No VOC control technology to minimize emissions;
- VOC BACT limit of 0.88 lb VOC/Msf (3/8" basis)
- VOC BACT limit of 242.9 tpy.
- VOC emissions are fugitive in nature.

Georgia-Pacific proposes no stack testing to demonstrate ongoing compliance with the proposed short-term limit because the emissions from the presses are fugitive in nature.

EPD VOC BACT Selection: The following data is taken from page 5-7 and Appendix B of the application.

Option	Comparison Data	Georgia-Pacific Data
Willamette Industries, Inc. RBLC ID No. LA-0125 (2002)	15.7 lb/hr (as carbon) 33.11 tpy	Proposal PSD Applicability Values: 0.88 lb/Msf (3/8" basis) (See Note 3) 58.8 lb/hr (See Note 4) 242.9 tpy VOC on a "as carbon basis" 0.54 lb/Msf (3/8" basis) 33.99 lb/hr (See Note 5) BACT Proposal 0.88 lb/Msf (3/8" basis) (See Note 3) 242.9 tpy
Camden Complex RBLC ID No. TX-0367 (1998)	15.11 lb/hr (as carbon)	

Note 3: From page B-28 as WPP1
Note 4: From page B-3
Note 5: VOC = (0.54 lb/Msf)*(551,200 Msf/yr)*(1 yr/8760 hrs) = 33.99 lb/hr

Conclusion
Georgia EPD sets the VOC BACT for the Press Source Group ID No. 400 as 242.9 tons during any twelve consecutive months using a VOC emission factor of 0.88 lb/Msf (3/8" basis) or an alternative the value approved by the Division whichever is lower. This BACT limit includes startup and shutdown and malfunction. A short-term VOC BACT limit is not recommended because the press source group's emissions are fugitive in nature and cannot be verified with ease via performance testing.

4.3 Boiler

Georgia-Pacific currently operates a 355 MMBtu/hr biomass fired boiler. Georgia-Pacific proposes to modify the existing biomass boiler by removing plates and baffles that had been installed to make the oversized boiler more efficient when operating at lower steam loads. Although Georgia-Pacific is making combustion improvements to the boiler as part of this project, they are not taking any credit for any reduction in the VOC emission factor as part of the work.

Volatile Organic Compounds

Top-Down BACT Alternatives: The applicant identified and performed detailed discussion of the following VOC control technology for the plywood presses.

- Good combustion practices;
- Catalytic oxidation; and
- Thermal oxidation.

Please refer to pages 5-14 through 5-16 of the application for a further review of the applicant's step 1 (Top-Down BACT Alternatives). The Division supports the applicant's findings.

Technical Feasibility Analysis: The applicant specified the following VOC control technologies as technically feasible:

- Good combustion practices;
- Catalytic oxidation; and
- Thermal oxidation.

Please refer to page 5-16 of the application for a further review of the applicant's step 2 BACT analysis. The Division supports the applicant's findings.

Ranking the Technically Feasible Alternatives: Application No. 22349 presents this analysis on page 5-16. The applicant ranked the VOC control technologies as follows:

- Thermal Oxidation (RTO) = 95 percent,
- Regenerative Catalytic Oxidation (RCO) = 70 percent, and
- Good combustion practices = 0 percent.

The Division concurs with the applicant's findings.

Energy, Environmental and Economic Analysis: The applicant's energy, environmental and economic analysis is found on pages 5-16 through 5-17. The results of the applicant's findings are presented in the following table:

Option	Control Device	VOC Controlled Emissions (VOC as propane)	Cost Effectiveness ($ controlled/ton of VOC reduced)
Base Case	Good combustion practices	PAE = 22.3 tpy – See Note 4 PTE = 36.1 tpy – See Note 4	Base Case
Option 1	Regenerative Catalytic Oxidation with 70% VOC Control	23.06 tpy –See Note 5	$33,176 based on 54.84 tons of VOC reduced
Option 2	Thermal Oxidation with 90% VOC Control	3.92 tpy –See Note 6	$91,873 based on 74.42 tons of VOC reduced

Note 4: PAE taken from page B-11. PTE taken from page D-26 based on proposed VOC BACT of 0.023 lb/MMBtu. Applicant used a PTE of 78.4 tpy in the cost analysis. This PTE is based on NCASI TB 884 factor plus 20% safety factor (old emission factor).
Note 5: Taken from Table 5-18. Georgia-Pacific used an uncontrolled VOC emission rate of 78.4 tpy rather than 22.3 tpy
Note 6: Taken from Table 5-15. Georgia-Pacific used an uncontrolled VOC emission rate of 78.4 tpy rather than 22.3 tpy.

The applicant presented an environmental and energy impact analyses in Table 5-19 of the application.

VOC BACT Emission Standard Analysis: Georgia-Pacific proposed a VOC BACT limit of:

- Good combustion practices;

- VOC BACT limit of 0.023 lb/MMBtu, as propane; and
- VOC BACT limit of 36.1 tpy, as propane.

Georgia-Pacific proposes to verify compliance with the proposed BACT using the following techniques:

- Monitor the oxygen concentration in the boiler exhaust (minimum oxygen level, 30-day rolling average as required in Boiler MACT) to demonstrate that good combustion conditions are maintained during normal operations.
- Stack test following the combustion improvements.

EPD VOC BACT Selection: The following data is taken from page 5-7 and Appendix B of the application.

Option	Comparison Data
NCASI Technical Bulletin 1013	0.019 lb/MMBtu VOC as carbon or 0.023 lb/MMBtu as propane.
RBLC lowest VOC emission rate	0.023 lb/MMBtu as propane

Conclusion
Georgia EPD sets the VOC BACT for the Biomass Boiler (Emission Unit ID No. 400) as 36.1 tons during any twelve consecutive months including startup and shutdown and malfunction. A short-term VOC BACT limit is set as 0.023 lb/MMBtu, as propane and this limit does not apply during periods of startup and shutdown.

Glue Lines

Georgia-Pacific proposes to install a new glue line and rebuild/upgrade the existing glue line as part of the expansion project. The VOC emissions from the glue lines will be less than 1 tpy. The VOC emissions are fugitive as they are emitted directly into the processing building, and not through a stack.

Volatile Organic Compounds

Top-Down BACT Alternatives: The applicant identified and performed detailed discussion of the following VOC control technology for the glue lines.

- Use of low VOC content glues.

Please refer to page 5-18 of the application for a further review of the applicant's step 1 (Top-Down BACT Alternatives). The Division supports the applicant's findings.

Technical Feasibility Analysis: The applicant specified the following VOC control technologies as technically feasible:

- Use of low VOC content glues.

Please refer to page 5-18 of the application for a further review of the applicant's step 2 BACT analysis. The Division supports the applicant's findings.

Ranking the Technically Feasible Alternatives: Application No. 22349 presents this analysis on page 5-18. The applicant ranked the VOC control technologies as follows:

- Use of low VOC content glues.

The Division concurs with the applicant's findings.

Energy, Environmental and Economic Analysis: The applicant is proposing a pollution prevention option and so no energy, environmental or economic analysis was presented.

VOC BACT Emission Standard Analysis: Georgia-Pacific proposed a VOC BACT limit of:

- Use glues containing a VOC content of less than 0.3 weight percent; and
- VOC BACT emissions limit of 0.96 tpy.

Georgia-Pacific proposes to verify compliance with the proposed BACT using the following techniques:

- Recordkeeping.

Conclusion
Georgia-Pacific estimated VOC emissions from the glue lines using a VOC emission factor of 0.0035 lb/Msf based on the sum of the emission factors for the glue components. The VOC emission factor for the individual glue components is taken from EPA reference test method T08 average plus two standard deviations. Georgia-Pacific did not provide data which can be used to convert this emission factor in lb/Msf to pounds of VOC per pound of glue. In this case, this emission point is a negligible emission point when compared to the other source of process emissions. Therefore, Georgia EPD is setting the VOC BACT for the glue lines as not using glues which contain a VOC weight percent of 0.3 or greater.

5.0 TESTING AND MONITORING REQUIREMENTS

Revisions to Existing Permit Condition No. 4.1.3

This existing permit condition is revised as follows:

- Addition of Condition No. 4.1.3.k to add Method 7 or 7E to be used to determine NOx emissions from the biomass boiler (Emission Unit ID No. 800).
- Addition of Condition No. 4.1.3.l to add Method 10 to be used to determine CO emissions from the biomass boiler (Emission Unit ID No. 800).
- Addition of Condition No. 4.1.3.m to add Methods 201A and 202 to be used to determine PM_{10} and $PM_{2.5}$ emissions from the biomass boiler (Emission Unit ID No. 800).
- Addition of Condition 4.1.3.n to add Methods 25 or 25A to be used to determine VOC emissions from the biomass boiler (Emission Unit ID No. 800).
- Addition of Condition 4.1.3.o to add a definition for "Wood Products Protocol" method of computing VOC emissions.
- Addition of 4.1.3.p to add Method 204 for Temporary Total Enclosure.

New Condition 4.1.4 is added as an update to the Georgia EPD Title V template.

Veneer Dryers-Hot Zones of Source Group ID No. 300

The hot zones of the veneer dryers [Source Group ID Nos. 300] are subject to the requirements of PSD BACT for emissions of VOC, Georgia Rule 391-3-1-.02(2)(e) for PM emissions and Georgia Rule 391-3-1-.02(2)(b) for visible emissions. VOC and HAP emissions from the hot zones of the veneer dryers are to be controlled by the existing RTO/RCO hybrid system [ID No. TCO]. Testing and monitoring requirements to aid in the verification of compliance with the applicable emissions limit are specified in the following table:

Standard	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
VOC BACT specified as percent VOC reduction	391-3-1-.02(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.a 4.2.11.a 5.2.2.a 5.2.2.c 5.2.7 5.2.8 5.2.9 5.2.12 5.2.13 5.2.14 5.2.15 5.2.16 5.2.17	Testing Frequency: After completion of the modification for Phases I and II, respectively, of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct performance tests specified by Condition No. 4.2.2.a and/or 4.2.11.a should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out. Existing monitoring requirements for RTO/RCO (ID No. TCO). <u>No new monitoring requirements are imposed by this PSD permit amendment.</u>
VOC BACT limit in tons per year	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.b In Section 6 of Permit	To determine VOC emission factor in lb/MSF (3/8" basis) Compliance tracked through record keeping and calculations
PM (Georgia Rule 391-3-1-.02(2)(e)) Visible Emissions (Georgia Rule 391-3-1-.02(2)(b))	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	NA	No testing or monitoring for verification of compliance with Georgia Rules (e) and (b) is prescribed because the controlled emission source should easily comply with the state rule emission limits. There are no existing testing or monitoring requirements for these continued requirements.

Veneer Dryers-Cooling Zones of Source Group ID No. 300

The cooling zones of the veneer dryers [Source Group ID Nos. 300] are subject to the requirements of PSD BACT for emissions of VOC; Georgia Rule 391-3-1-.02(2)(e) for PM emissions. Emissions from the cooling zones of the veneer dryers are un-controlled. Testing and monitoring requirements to

aid in the verification of compliance with the applicable emissions limits are specified in the following table:

Standard	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
VOC BACT limit in tons per year	391-3-1-.02(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.f 4.2.2.j 4.2.3 4.2.12 In Section 6 of Permit	Testing Frequency: After completion of the modification for Phases I and II, respectively, of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct performance tests specified by Condition No. 4.2.2.f and/or 4.2.2.j should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out. Compliance tracked through record keeping and calculations.
Georgia Rule 391-3-1-.02(2)(e)) Visible emissions (Georgia Rule 391-3-1-.02(2)(b))	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	NA	No testing or monitoring for verification of compliance with Georgia Rules (e) and (b) is prescribed because the controlled emission source should easily comply with the state rule emission limits. There are no existing testing or monitoring requirements for these continued requirements.
To verify credibility of PM, PM_{10}, and $PM_{2.5}$ emission factors	Verify avoidance of PSD	4.2.2.c 4.2.2.d 4.2.2.e 4.2.2.g 4.2.2.h 4.2.2.i 4.2.11.c 4.2.11.d 4.2.11.e 4.2.11.g 4.2.11.h 4.2.11.i	Testing Frequency: After completion of the modification for Phases I and II, respectively, of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct these performance tests specified should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out.

Glue Lines and Press Source Group ID No. 300

The presses [Source Group ID No. 400] are subject to the requirements of PSD BACT for emissions of VOC; Georgia Rule 391-3-1-.02(2)(e) for PM emissions and Georgia Rule 391-3-1-.02(2)(b) for visible emissions.

Standard for Presses	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
VOC BACT limit in tons per year	391-3-1-.02(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.n 4.2.11.n	Testing Frequency: After completion of the modification for Phases I and II, respectively, of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project.

Standard for Presses	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
		4.2.3 4.2.12 In Section 6 of Permit	Conduct performance tests specified by Condition No. 4.2.2.n and/or 4.211.n should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out. Compliance tracked through record keeping and calculations.
Georgia Rule 391-3-1-.02(2)(e)) Visible emissions (Georgia Rule 391-3-1-.02(2)(b))	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	NA	No testing or monitoring for verification of compliance with Georgia Rules (e) and (b) is prescribed because the controlled emission source should easily comply with the state rule emission limits. There are no existing testing or monitoring requirements for these continued requirements.
To verify credibility of PM, PM_{10}, and $PM_{2.5}$ emission factors	Verify avoidance of PSD	4.2.2.k 4.2.2.l 4.2.2.m 4.2.11.k 4.2.11.l 4.2.11.m	Testing Frequency: After completion of the modification for Phases I and II, respectively, of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct these performance tests specified should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out.

Verification of compliance with the VOC BACT limit expressed as a VOC content limit for the glue lines is covered under Section 6 of this narrative.

Boiler

The biomass boiler [Emission Unit ID No. 800] is subject to the requirements of PSD BACT for emissions of VOC; NSPS Db for PM and visible emissions; PSD Avoidance for NOx, CO, and PM, emissions; and Georgia Rule 391-3-1-.02(2)(g) for fuel sulfur content, and Georgia Rule 391-3-1-.02(2)(d) for PM and visible emissions. Verification of compliance with the applicable requirements are specified in the following table:

Standard	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
VOC BACT in lb/MMBtu	391-3-1-.02(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.g 4.2.3	Testing Frequency: After completion of the modification for Phase I of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct performance tests specified by Condition No. 4.2.2.g should the boiler's

Standard	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
			steam production rate increase by ten percent above the rate at which the acceptable performance test was carried out.
VOC BACT limit in tons per year	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i)	4.2.2.g 4.2.3 In Section 6 of Permit	To determine VOC emission factor. Frequency of verifying VOC emission factor. Compliance tracked through record keeping and calculations
Total PM Georgia Rule 391-3-1-.02(2)(d), Filterable PM NSPS Db Visible emissions -Georgia Rule 391-3-1-.02(2)(d) Visible emissions NSPS Db	391-3-1-.03(6)(b)1.(i) 40 CFR 70.6(a)(3)(i) 40 CFR 60.46b(d)	4.2.1 4.2.2.i 4.2.2.i 4.2.2.i 4.2.2.j 4.2.2.j 4.2.12 5.2.1.a 5.2.2.b 5.2.3 5.2.4 5.2.9 5.2.11	Testing Frequency: After completion of the modification for Phase I of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct performance tests specified by Condition Nos. 4.2.2.i and 4.2.2.j should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out. Existing monitoring requirements for multiclone and ESP. No new monitoring requirements imposed by this amendment.
PSD Avoidance –NOx (tpy) Testing and Monitoring is almost identical to Green Energy Resource Center (089-00379)	Avoidance of 40 CFR 52.21	4.2.14 4.2.15 5.2.1.b 5.2.1.c 5.2.1.d 5.2.1.e 5.2.1.f 5.2.3	Monitoring using a CEMS and amount of each fuel combusted (MMBtu basis).
PSD Avoidance – CO (lb/MMBtu)	Avoidance of 40 CFR 52.21	4.2.2.h	Testing Frequency: After completion of the modification for Phase I of the project described by Application No. 22349, within 60 days after achieving the maximum operating rate at

Standard	Legal Authority for Testing and Monitoring	Condition No.	Frequency of Testing or Monitoring
			which the facility will be operated at, but no later than 180 days after initial startup of Phase I of the project. Conduct performance tests specified by Condition Nos. 4.2.2.h should the dryer production rate increase by ten percent above the rate at which the acceptable performance test was carried out. <u>No new monitoring requirements imposed by this amendment.</u>

Georgia EPD proposes that Georgia-Pacific monitor NOx emissions from the boiler (Emission Unit ID No. 800) by installing and operating a continuous emissions monitoring system (CEMS) on the control equipment exhaust stack. Each month, the facility will calculate monthly and 12-month rolling total emissions of NOx using the CEMS data and will compare the calculated 12-month rolling total emissions with the PSD Avoidance limit of 161.9 tons. Note: The use of a CEMS is consistent with a PSD permit amendment issued for Proctor and Gamble in Albany for the construction and operation of a biomass boiler.

Compliance Assurance Monitoring-Hot Zones of Veneer Dryers:

The veneer dryer hot zones are subject to PSD for VOC emissions (tons per year). In addition, the requirements of PSD require the operation of the existing hybrid RTO/RCO to control VOC emissions at or above 90% (i.e., DRE). The existing permit establishes 40 CFR 64 as an applicable requirement for VOC emissions from this emission unit.

Georgia-Pacific requested removal of the CAM requirements for the existing hybrid RTO/RCO for VOC emissions because the hazardous air pollutant (HAP) emissions from the same emission unit are subject to the PCWP MACT Standard. Existing Condition 3.2.1 establishes the PCWP MACT Standard as the legal citation for the VOC DRE. Georgia EPD investigated Georgia-Pacific's request. The PCWP MACT Standard does not appear to regulate VOC emissions as a surrogate for individual HAP emissions therefore it is questionable about the correctness of the legal citation for existing condition 3.2.1. Therefore, Georgia EPD believes the existing CAM requirements for the hybrid RTO/RCO apply because the control device is not subject to a MACT standard which regulated VOC emissions as a surrogate for HAP emissions.

Compliance Assurance Monitoring-Boiler:

The boiler (Emission Unit ID No. 800) is subject to NSPS Db for filterable PM emissions and to Georgia Rule 391-3-1-.02(2)(d) for total PM emissions. PM emissions from the boiler are controlled by a multiclone and a dry ESP. Georgia EPD investigated whether the requirements of 40 CFR Part 64 (CAM) applied to emissions of filterable PM and total PM from the biomass boiler (Emission Unit ID No. 800).

The requirements of 40 CFR 64 do not apply for filterable PM emissions because the emission limit is based on NSPS Db. The requirements of 40 CFR 64 do apply for total PM emissions because the emission limit is based on Georgia Rule 391-3-1-.02(2)(d). The existing requirements specified in Condition Nos. 5.2.9 and 5.2.11 are not deleted as they apply as CAM for Georgia Rule 391-3-1-.02(2)(d).

The boiler (Emission Unit ID No. 800) is subject to a PSD Avoidance limit (tons per year) for NOx emissions. These emissions may be controlled by an SNCR if determined to be needed by Georgia-Pacific. The uncontrolled potential to emit of NOx emissions, after this modification, is 161.9 tons per year. The operation of the SNCR is subject to CAM if Georgia-Pacific installs SNCR on the boiler exhaust and the CEMS is not the official compliance determination method. The draft permit will propose that the CEMS is the official compliance determination method in order for CAM to be avoided.

6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirement. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

Category	**Condition 6.1.7**	**Condition 6.1.8 – NEW Condition**
Excess Emissions	The legal citation includes NSPS Db upon modification and initial startup of the boiler	NA
Exceedances (recommend no changes to 6.1.7.b)	Any time a HAP coating as defined in 40 CFR 63.2292 is used in any Group 1 miscellaneous coating operation at the facility	<u>Boiler</u> NOx – PSD Avoidance: 161.9 tons during any twelve consecutive months. VOC – BACT: 82.5 tons during any twelve consecutive months from the hot zones. VOC-BACT; 21.9 tons during any twelve consecutive months from the cooling zones. <u>Presses and Glue Lines</u> VOC-BACT: 146.9 tons during any twelve consecutive months from the press source group upon initial startup of Phase I. VOC-BACT: 242.6 tons during any twelve consecutive months from the press source group upon initial startup of Phase II. VOC-BACT: Use of VOC containing glue lines must be less than 0.3 weight percent.
Excursions (recommend no changes to 6.1.7.c)	Results from weekly inspection of cyclones, multiclones, and baghouses may be an excursion. Any visible emissions from baghouses PFB1 or PFB2 which occurs during two consecutive determinations. Any 3-hour block average of the TCO combustion chamber temperature is less than the value established by the most recent Division approved test (for thermal and catalytic operating modes). Any 3-hour period during which the average total secondary power to ESP is less than 70% of the value determined and reported in accordance with Condition 4.2.4.	None applicable

Category	Condition 6.1.7	Condition 6.1.8 – NEW Condition
	Any 12-month period during which the activity level of a representative sample of catalyst in the TCO, when operating in the catalytic mode, was not checked as required by Condition 4.2.9	
Other	None applicable	Include the following data in the report required by Condition 6.1.4: Certification of whether applicant complied with VOC content limit of VOC materials used in glue lines, A twelve consecutive month total VOC emissions (in tons) from Presses Veneer Dryers Hot Zones Veneer Dryers Cooling Zones Boiler The rolling annual capacity factor for the boiler. A twelve consecutive month total NOx emissions (in tons) from the boiler.

The following section provides a brief description of the method for verifying compliance with the various mass emission limits in the permit.

Verification of Compliance with the VOC Mass Emission Limits

Veneer Dryers Hot Zones: Compliance with the twelve month rolling total VOC emission rate from this emission unit is based on (1) the monthly amount of plywood processed by the facility in thousand square feet of plywood on a 3/8" basis (Condition No. 6.2.23.a) and (2) a VOC emission factor of 2.9 lb/Msf (3/8" basis) or the most recent Division approved source test, whichever is lower. The Permittee is required to maintain monthly records which specify the twelve consecutive month total VOC emissions (in tons) from the veneer dryers hot zones (of Source Group ID No. 300). Failure to maintain VOC emissions from this emission unit below 82.5 tons during any twelve consecutive must be reported as an exceedance.

Veneer Dryers Cooling Zones: Compliance with the twelve month rolling total VOC emission rate from this emission unit is based on (1) the monthly amount of plywood processed by the facility in thousand square feet of plywood on a 3/8" basis (Condition No. 6.2.23.a) and (2) a VOC emission factor of 0.08 lb/Msf (3/8" basis) or the most recent Division approved source test, whichever is lower. The Permittee is required to maintain monthly records which specify the twelve consecutive month total VOC emissions (in tons) from the veneer dryers cooling zones (of Source Group ID No. 300). Failure to maintain VOC emissions from this emission unit below 21.9 tons during any twelve consecutive must be reported as an exceedance.

Presses: Compliance with the twelve month rolling total VOC emission rate from this emission unit is based on (1) the monthly amount of plywood processed by the facility in thousand square feet of plywood on a 3/8" basis (Condition No. 6.2.23.a) and (2) a VOC emission factor of 0.88 lb/Msf (3/8" basis) or the most recent Division approved source test, whichever is lower. The Permittee is required to maintain monthly records which specify the twelve consecutive month total VOC emissions (in tons) from the presses (of Source Group ID No. 300). Failure to maintain VOC emissions from this

emission unit below 146.0 tons (Phase I) or 242.6 tons (Phase II) during any twelve consecutive must be reported as an exceedance.

Boiler: Compliance with the twelve month rolling total VOC emission rate from this emission unit is based on (1) the monthly amount of fuel burned in the boiler (Condition No. 5.2.3.c) and (2) a VOC emission factor of 0.023 lb/MMBtu or the most recent Division approved source test, whichever is lower. The Permittee is required to maintain monthly records which specify the twelve consecutive month total VOC emissions (in tons) from the boiler (of Source Group ID No. 800). Failure to maintain VOC emissions from this emission unit below 36.1 tons during any twelve consecutive must be reported as an exceedance. It is important to note that the fuel usage (MMBtu) of wood may be highly variable. New Condition 5.2.3.c requires the Permittee to submit a fuel sampling plan which takes into account the variable nature of the combusted green and dry wood residuals Btu value.

Verification of Compliance with the NOx Mass Emission Limits

Boiler: Compliance with the twelve month rolling total NOx emission rate from this emission unit is based on (1) the monthly amount of fuel burned in the boiler (Condition No. 5.2.3.c) and (2) the required CEMS (Condition No. 5.2.1.b) which provides a NOx emission rate in pounds per million Btu. The Permittee is required to maintain monthly records which specify the twelve consecutive month total NOx emissions (in tons) from the boiler (of Source Group ID No. 800). Failure to maintain NOx emissions from this emission unit below 161.9 tons during any twelve consecutive must be reported as an exceedance. It is important to note that the fuel usage (MMBtu) of wood may be highly variable. New Condition 5.2.3.c requires the Permittee to submit a fuel sampling plan which takes into account the variable nature of the combusted green and dry wood residuals Btu value.

7.0 AMBIENT AIR QUALITY REVIEW

An air quality analysis is required to determine the ambient impacts associated with the construction and operation of the proposed project. The main purpose of the air quality analysis is to demonstrate that emissions emitted from the proposed project, in conjunction with other applicable emissions from existing sources (including secondary emissions from growth associated with the new project), will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment in a Class I or Class II area. NAAQS exist for NO_2, CO, $PM_{2.5,}$ PM_{10}, SO_2, Ozone (O_3), and lead. PSD increments exist for SO_2, NO_2, PM_{10} and $PM_{2.5}$.

Model Input Data – Source Data:

Air Toxics Modeling: Tables 6-1 and 6-2, of the application, listed the modeled point source and volume source parameters and page D-4, of the application, listed the potential to emit TAP emissions used in this analysis.

Modeling Input Data – Good Engineering Practice (GEP) Stack Heights: No stack heights exceed the GEP regulatory stack height of 65 meters.

Modeling Input Data – Building Downwash: "Good Engineering Practice" (GEP building downwash analysis is not required for this analysis.

Model Input Data - Meteorological Data: The hourly meteorological data used in this review were surface and upper air observations from Athens, GA NWS station for the period of 1989-1993. The data were compiled and provided by Georgia EPD.

Model Input Data – Terrain Elevation: Topography was found to be generally flat in the site vicinity, with no terrain elevations above the height of the main stack (24.4 meters of stack height plus 190.9 meters of the base elevation) within 20 km of the surrounding area. Terrain data from USGS 1-

sec National Elevation Dataset (NED) CONUS were extracted to obtain the elevations of all sources and receptors by AERMAP terrain processor (version 11103). The resulting elevation data were verified by comparing contoured receptor elevations with USGS 7.5-minute topographic map contours.

Modeled Input Data: Receptor Grids Analysis: The discrete receptors were placed 50 meters apart on a Cartesian grid along the fence line. Receptors extend outwards from the fence line at 100-meter intervals to approximately 2 km and at 500-meter intervals to approximately 4 km from the facility centroid. This domain is sufficient to capture the maximum impact.

Class I Significant Impact and AQRV Analysis

The applicant did not provide a Class I area analysis because the proposed project did not trigger for any visibility-affecting or deposition pollutants.

Class II Significant Impact

VOC is the only criteria pollutant with an emission rate greater than the PSD significant emission rate; therefore neither Class II area significant impact analysis nor monitoring *de minimis* concentration analyses are required. In addition, the potential soil and vegetation impacts and the Class II visibility analyses are not required.

Ozone Impact Analysis: Since the proposed project will result in a net VOC emissions increase greater than 100 tons per year, the PSD rule requires an evaluation to determine whether pre-construction monitoring is warranted for ground level ozone. The applicant's ozone impact analysis is presented in Section 7-4 of the application.

The proposed modification is expected to emit 201.92 tons per year of VOC. There are no ozone monitors in Morgan County. The applicant examined the 3-year rolling average ozone concentration at the College Station Road monitoring site (13-059-0002), Athens, Clarke County, GA, located 34 km north of the facility. The latest three-year design value (2010-2012) average of the 4th highest annual values is 73 ppbv. This area is in attainment with the 8-hour ozone standard (75 ppbv).

Georgia Air Toxics Assessment

The proposed project would emit numerous air toxic pollutants (TAPs). The applicant presented the TAP emission rates on page D-4 of the application and the modeled results in Table 6-3. The impacts of facility-wide toxic air pollutant emissions at the facility were evaluated by Georgia EPD according to the Georgia Air Toxics Guideline. The annual, 24-hour and 15-minute AACs of 34 TAPs were reviewed based on U.S. EPA IRIS reference concentration (RfC), and OSHA Permissible Exposure (PEL), etc. The modeled maximum ground-level concentrations (MGLCs) were calculated using the ISCST3 dispersion model (version 02035), the hourly and annual emission rates were used for short term (1-hour and 24-hour) and annual averaging periods, respectively.

Georgia EPD re-ran the ISCST3 modeling using information provided in the updated application.. Table 6-1 summarizes the AAC levels and MGLCs of the TAPs at the above three averaging periods. Note that the maximum 15-minute impact is based on the maximum 1-hour modeled impact multiplied by a factor of 1.32. As shown in Table 6-1, the modeled MGLCs for all TAPs evaluated are below their respective AAC levels. Therefore, the applicant meets the applicable Georgia Air Toxics Guideline.

Table 6-1: Modeled MGLCs and the Respective AACs

Pollutant	Averaging period	Year	MGLC (µg/m^3)	AAC (µg/m^3)	*Percent of AAC (%)*
Acetaldehyde	Annual	1993	***1.74E+00***	***4.55E+00***	***38.34***
	15-Min	1992	***2.70E+02***	***4.50E+03***	***6.00***
Acetophenone	24-Hour	1989	1.80E-04	1.17E+02	0.00
Acrolein	Annual	1991	***8.18E-03***	***2.00E-02***	***40.90***
	15-Min	1991	***4.23E-01***	***2.29E+01***	***1.85***
Antimony	Annual	1991	1.00E-05	2.00E-01	0.01
	24-Hour	1989	7.00E-05	1.20E+00	0.01
Arsenic	Annual	1991	***4.00E-05***	***2.33E-04***	***17.20***
	15-Min	1991	***2.38E-03***	***2.00E-01***	***1.19***
Benzene	Annual	1991	3.17E-02	4.50E-01	7.05
	15-Min	1991	1.75E+00	1.60E+03	0.11
Bis(2-ethylhexyl)phthalate	24-Hour	1989	1.00E-05	1.19E+01	0.00
	15-Min	1989	2.64E-05	1.00E+03	0.00
1,3-Butadiene	Annual	1989	2.00E-05	3.33E-02	0.06
	15-Min	1989	2.17E-02	1.10E+03	0.00
Cadmium	Annual	1989	1.00E-05	5.56E-03	0.18
	15-Min	1991	4.09E-04	3.00E+01	0.00
Carbon Disulfide	Annual	1991	1.09E-03	7.00E+02	0.00
	15-Min	1991	6.09E-02	5.40E+03	0.00
Carbon Tetrachloride	Annual	1991	3.90E-04	6.67E-01	0.06
	15-Min	1991	2.18E-02	1.57E+04	0.00
Chlorobenzene	24-Hour	1989	1.79E-03	8.33E+02	0.00
Chloroform	Annual	1991	3.40E-04	4.35E-01	0.09
	15-Min	1991	2.18E-02	2.40E+04	0.00
Chloromethane	Annual	1991	8.00E-04	9.00E+01	0.00
	15-Min	1991	4.50E-02	4.14E+04	0.00
Cobalt	24-Hour	1989	1.35E-03	2.38E-01	0.57
Cumene	Annual	1991	1.50E-04	4.00E+02	0.00
Dichlorobenzene	Annual	1989	0.00E+00	8.00E+02	0.00
Di-n-Butyl Phthalate	24-Hour	1989	3.58E-03	1.19E+01	0.03
Formaldehyde	Annual	1991	***3.76E-01***	***1.10E+00***	***34.21***
	15-Min	1993	***8.88E+00***	***2.46E+02***	***3.61***
Hexachlorobenzene	Annual	1989	1.00E-05	2.17E-02	0.05
Hexane	Annual	1991	4.62E-03	7.00E+02	0.00
	15-Min	1991	2.37E-01	1.76E+04	0.00
Hydrogen Chloride	Annual	1991	1.37E-01	2.00E+01	0.69
	15-Min	1991	7.71E+00	7.00E+02	1.10
Manganese	Annual	1991	***2.39E-03***	***5.00E-02***	***4.78***
	15-Min	1991	***1.34E-01***	***5.00E+02***	***0.03***
Mercury	Annual	1989	2.00E-05	3.00E-01	0.01
	15-Min	1991	1.36E-03	1.00E+01	0.01
Methanol	24-Hour	1993	***5.18E+01***	***6.19E+02***	***8.36***
	15-Min	1992	***4.25E+02***	***3.28E+04***	***1.30***
Methyl Bromide	Annual	1991	2.40E-04	5.00E+00	0.00
	15-Min	1991	1.32E-02	8.00E+03	0.00
Methylene Chloride	Annual	1991	7.34E-03	2.13E+01	0.03
	15-Min	1991	4.12E-01	4.34E+04	0.00
MIBK	Annual	1991	2.30E-01	3.00E+03	0.01
	15-Min	1993	7.51E+00	3.07E+04	0.02
Naphthalene	Annual	1991	2.06E-03	3.00E+00	0.07
	15-Min	1991	1.15E-01	5.00E+03	0.00
Nickel	24-Hour	1989	7.50E-04	7.90E-01	0.09
Pentachlorophenol	24-Hour	1989	7.00E-05	1.19E+00	0.01
Phenol	24-Hour	1991	***5.17E+00***	***4.52E+01***	***11.43***
	15-Min	1991	***2.64E+01***	***6.00E+03***	***0.44***
Propionaldehyde	Annual	1991	1.25E-02	8.00E+00	0.16

Pollutant	Averaging period	Year	MGLC ($\mu g/m^3$)	AAC ($\mu g/m^3$)	*Percent of AAC (%)*
Selenium	24-Hour	1989	4.50E-04	4.76E-01	0.09
Styrene	Annual	1991	1.65E-02	1.00E+03	0.00
	15-Min	1991	9.24E-01	8.52E+04	0.00
Toluene	Annual	1992	9.70E-02	5.00E+03	0.00
	15-Min	1992	1.84E+01	1.13E+05	0.02
Trichloroethylene	Annual	1991	1.70E-04	2.00E+00	0.01
	15-Min	1991	9.70E-03	1.08E+05	0.00
Vinyl Chloride	Annual	1991	1.60E-04	1.00E+00	0.02
	15-Min	1991	8.98E-03	1.28E+03	0.00
Xylene	Annual	1991	2.14E-02	1.00E+02	0.02
	15-Min	1992	1.38E+00	6.55E+04	0.00

8.0 ADDITIONAL IMPACT ANALYSES

PSD requires an analysis of impairment to visibility, soils, and vegetation that will occur as a result of a modification to the facility and an analysis of the air quality impact projected for the area as a result of the general commercial, residential, and other growth associated with the proposed project.

VOC is the only criteria pollutant with an emission rate greater than the PSD significant emission rate, triggered for this project and therefore the potential soil and vegetation impacts and the Class II visibility analyses are not required.

9.0 EXPLANATION OF DRAFT PERMIT CONDITIONS

The permit requirements for this proposed facility are included in draft Permit Amendment No. 2436-211-0013-V-03-1. The following table specifies the new draft permit amendment:

Condition No.	Description
1.3	Process description of the proposed modification
3.1	Emission Units Table – Modified Permit Condition
3.2.2	New Condition – Requires enclosure of debarker upon initial startup of Phase I of the project for Avoidance of 40 CFR 52.21 for PM, PM_{10}, and $PM_{2.5}$ emissions.
3.2.3	New Condition – identifies existing equipment which comprises Source Group ID No. 300 for clarity purposes
3.2.4	New Condition – specifies the nature of the physical changes to Source Group ID No. 300 for clarity purposes.
3.2.5	New Condition – specifies PSD Avoidance limits for emissions of NOx and CO from the boiler.
3.2.6	New Condition- install and operate an SNCR to control emissions of NOx from boiler, if Permittee determines control is needed. Georgia-Pacific has a target NOx emission rate set at 0.170 lb/MMBtu from the combustion modifications. This numerical value keeps them from triggering PSD for NOx.
3.3.1	Existing condition which is deleted and placed as New Condition No. 3.3.13 – Specifies that Part 63 Subpart A and Subpart DDDDD are applicable to the facility.
3.3.9	New Condition – General provision for PSD per 40 CFR 52.21(r)(1).
3.3.10	New Condition – General provision for PSD per 40 CFR 52.21(r)(2).
3.3.11	New Condition – Specifies that Part 60 Subpart A and Subpart Db are applicable requirements for the boiler. Effective date of permit condition is upon initial startup of Phase I modification.
3.3.12	New Condition – NSPS Db emission standards for PM and visible emissions

Condition No.	Description
3.3.13	New Condition – NSPS Db capacity factor limit.
3.3.14	New Condition - Specifies that Part 63 Subpart A and Subpart DDDDD are applicable to the facility.
3.3.15	New Condition – Specifies the CO standard per the BMACT with an effective date of January 31, 2016.
3.3.16	New Condition – Specifies the filterable PM per the BMACT with an effective date of January 31, 2016.
3.3.17	New Condition – Specifies the visible emissions per the BMACT with an effective date of January 31, 2016.
3.3.18	New Condition – Establishes the existing hybrid RTO/RCO as BACT for VOC emissions on the Veneer Dryer hot zones.
3.3.19	New Condition – Establishes the VOC BACT destruction removal efficiency for the hybrid RTO/RCO.
3.3.20	New Condition – Establishes the VOC BACT limit from the veneer dryer hot zones in tons during any twelve consecutive months.
3.3.21	New Condition – Establishes the VOC BACT limit from the veneer dryer cooling zones in tons during any twelve consecutive months.
3.3.22	New Condition – Establishes the VOC BACT limit from the presses during any twelve consecutive months.
3.3.23	New Condition – Establishes the VOC BACT limit from the presses during any twelve consecutive months.
3.3.24	New Condition – Establishes the VOC BACT limit for materials used on the glue lines.
3.3.25	New Condition – Establishes the VOC BACT limits for the boiler.
4.1.3	Modified Condition – Added applicable reference test methods for emissions of NOx, CO, VOC, PM_{10} and $PM_{2.5}$.
4.1.4	New Condition – Georgia Title V permit template condition
4.2.1	Modified Condition – Specifies testing requirements for PM on the biomass boiler
4.2.2	Modified Condition – Specifies testing requirements for Phase I of the project for hybrid VOC control device, the hot and cooling zones of New Dryer #1, the presses and for the boiler.
4.2.3	Modified Condition – Specifies additional testing prescribed by Condition No. 4.2.2.
4.2.11	New Condition – Specifies testing requirements for Phase II of the project for hybrid VOC control device, the hot and cooling zones of New and/or Rebuilt Dryers1 and the presses.
4.2.12	New Condition – Specifies additional testing prescribed by Condition No. 4.2.11.
4.2.13	New Condition – Taken from existing permit and includes VOC BACT requirement for VOC DRE.
4.2.14	New Condition – Installation and operation of a NOx CERMS
4.2.15	New Condition – Determine the fuel F factor of the green and dry wood residuals combusted in the boiler.
5.2.1	Modified Condition – The legal authority for the COMS is updated to include NSPS Db. Added requirements for NOx CERMS.
5.2.3	Modified Condition – added paragraph c to track the amount and type of fuel burned in the boiler. Includes a reporting requirement
6.1.7.a.i	Modified Condition – The legal authority for the COMS is updated to include NSPS Db.
6.1.7.b.i	New Condition: Defines an exceedance for NOx emissions from the boiler per PSD Avoidance
6.1.7.b.ii	New Condition: Defines an exceedance for VOC emissions from the boiler per PSD BACT.
6.1.7.b.iii	New Condition: Defines an exceedance for VOC emissions from hot zones of veneer dryers per PSD BACT.

Condition No.	Description
6.1.7.b.iv	New Condition: Defines an exceedance for VOC emissions from cooling zones of veneer dryers per PSD BACT.
6.1.7.b.v	New Condition: Defines an exceedance for VOC emissions from the presses (Phase I) per PSD BACT.
6.1.7.b.vi	New Condition: Defines an exceedance for VOC emissions from the presses (Phase II) per PSD BACT.
6.1.7.b.vii	New Condition: Defines an exceedance for VOC content of glues used on glue lines per PSD BACT.
6.1.7.d.i	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the twelve consecutive month total VOC emissions (in tons) from the boiler.
6.1.7.d.ii	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the annual capacity factor for the boiler.
6.1.7.d.iii	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the twelve consecutive month total NOx emissions (in tons) from the boiler
6.1.7.d.iv	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the twelve consecutive month total VOC emissions (in tons) from the veneer dryer hot zones.
6.1.7.d.v	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the twelve consecutive month total VOC emissions (in tons) from the veneer dryer cooling zones.
6.1.7.d.vi	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case a certification that each VOC containing material used in the glue lines complies with the VOC BACT limit.
6.1.7.d.vii	New Condition: Defines a reporting requirement for each report required by Condition No. 6.1.4, in this case the twelve consecutive month total VOC emissions (in tons) from the presses.
6.2.23	New Condition: Specifies monthly record keeping requirements to aid in the calculation of VOC emissions from the dryers and the presses.
6.2.24	New Condition: Specifies the record keeping requirements for VOC containing products used on the glue lines.
6.2.25	New Condition: PSD reasonable possibility record keeping.
6.2.26	New Condition: PSD reasonable possibility record keeping
6.2.27	New Condition: Establishes requirement to maintain monthly VOC emissions from the hot zones of the veneer dryers.
6.2.28	New Condition: Establishes requirement to maintain rolling twelve month total VOC emissions from the hot zones of the veneer dryers.
6.2.29	New Condition: Establishes requirement to maintain monthly VOC emissions from the cooling zones of the veneer dryers.
6.2.30	New Condition: Establishes requirement to maintain rolling twelve month total VOC emissions from the cooling zones of the veneer dryers.
6.2.31	New Condition: Establishes requirement to maintain monthly VOC emissions from the presses.
6.2.32	New Condition: Establishes requirement to maintain rolling twelve month total VOC emissions from the presses.
6.2.33	New Condition: Establishes requirement to maintain monthly VOC emissions from the boiler.
6.2.34	New Condition: Establishes requirement to maintain rolling twelve month total VOC emissions from the boiler.
6.2.35	New Condition: Establishes requirement to maintain monthly NOx emissions from the boiler.
6.2.36	New Condition: Establishes requirement to maintain rolling twelve month total NOx emissions from the boiler.
6.2.37	New Condition: NSPS Db record keeping requirements for annual capacity factor for boiler.

Condition No.	Description
6.2.38	New Condition: Reporting requirements for initial startup of new and modified equipment.
6.2.39	New Condition – Reporting requirement for compliance plan for Boiler MACT (Major Source)
6.2.40	New Condition – Reporting requirement for Condition No. 6.2.26.
6.2.41	New Condition – Reporting requirement regarding whether the Permittee will install and operate an SNCR system on the boiler for control of NOx emissions.
6.2.42 6.2.43 6.2.44	New Condition – Reporting requirement regarding PSD Avoidance for PM, PM_{10}, and $PM_{2.5}$
7.14.1 7.14.2 7.14.3 7.14.4	New Condition – Specifies effective date of certain permit conditions.