TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Georgia-Pacific Wood Products LLC
223 Gordon Chapel Rd
Hawthorne, FL 32640

Hawthorne Plywood Plant
ARMS Facility ID No. 1070015
223 Gordon Chapel Rd
Hawthorne, FL 32640

PROJECT

Project No. 1070015-024-AC
Application for Air Construction Permit
Steam Coil Replacement Project

COUNTY

Putnam, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Northeast District Office
Air Resources Section
7625 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

January 24, 2011

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial activities. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Process Description and Location

The mill produces plywood and is categorized under the North American Industries Classification System (NAICS) code 321113 for Softwood Veneer & Plywood, Softwood Sawmill. The facility consists of three plywood veneer dryers, three presses, a wood-fired boiler that generates steam for use in the dryers, presses, and associated materials handling equipment.

Logs and glue are the primary raw materials used in the plywood panel production. The production process is composed of four principal manufacturing sub-processes:

1. The green end, which includes log handling, debarking, cutting, soaking vats, veneer lathes, and green veneer handling.
2. Veneer drying.
3. Glue line and pressing.
4. Finishing, which includes sawing, sanding, edge sealing, and shipping.

Logs are transported to the plant and temporarily stored in the log yard or wet deck. The logs are placed on the unscramble deck. From the deck, the logs are conveyed to the debarker, which removes the bark from the logs. Bark is conveyed to a hog for processing, and is stored under cover for shipment offsite, or to the boiler fuel house. The debarked logs are conveyed to the slasher saw. This saw cuts the logs into approximately 8.5 foot long sections called blocks. The blocks are then conveyed to the steaming vats, where they are soaked to condition them for peeling in the lathes.

The drying process consists of veneer dryers indirectly heated by steam from the boiler, and mechanical systems for moving the veneer through the dryers and onto the stacking bins. The exhaust

gases from the hot zones of the dryers are directed to a regenerative thermal oxidizer (RTO) to destroy volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from the wood veneer.

Also, periodically market conditions may cause the mill to produce final panels with dry veneer manufactured at another facility. Dry veneer is conveyed to one of two glue lines for assembly into panels. Whole veneer sheets are placed on a conveyor, sprayed with glue, and alternated with core material to form panels. Panels are sent to a pre-press in a stack, followed by individual panel pressing in one of three presses, where the glue is activated thermally.

Pressed panels are trimmed to final size at the panel saw. Some panels are further processed by the tongue and groove machine, specialty saw, or the sander. Wood residuals are collected at various points during the production process and are either shipped offsite or stored in bins for use as fuel in the wood-fired boiler. Finished panels are stacked; some receive treatment with end and/or edge seals, oil, or logo and product information. The panels are then stored in the warehouse before being shipped offsite.

Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

The existing three plywood dryers (Emission Unit No. 005) have a nominal rated production capacity of 50.4 thousand square feet per hour of 3/8" plywood board based on a monthly average. Georgia-Pacific Wood Products LLC proposes extensive replacement of the steam coils on dryer nos. 1, 2 and 3 to improve the efficiency of the veneer drying operation. Many of the existing coils have reached the end of their useful life. The coil replacement project is not intended or expected to result in an increase in pollutant emissions or production capacity.

Pursuant to Rule 62-212.400, F.A.C., Georgia-Pacific Wood Products LLC provided information to show that the project will not exceed the significant emissions rates that require preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality. In accordance with Rule 62-212.300, F.A.C., the draft permit requires Georgia-Pacific Wood Products LLC to provide reports summarizing the actual emissions for each year during the 5-year period following completion of the project. This is to ensure that the project remains minor with respect to PSD preconstruction review.

Proposed Work

<u>Wood Veneer Dryers</u>: The permittee is authorized to conduct this project on the wood veneer dryers as follows:

- Replace approximately 50% of the steam coils on dryer No. 1;
- Replace approximately 30% of the steam coils on dryer No. 2;
- Replace approximately 66% of the steam coils on dryer No. 3;

- Replacement of any appurtenances associated with the replacement steam coils necessary for their proper operation

Processing Schedule

09/13/2010	Department received the application for a minor source air pollution construction permit.
10/07/2010	Department requested additional information.
11/19/2010	Department received additional information; application complete.

2. PSD APPLICABILITY

General PSD Applicability

The Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. A PSD applicability review is required in areas currently in attainment with the state and federal AAQS or areas otherwise designated as "unclassifiable". A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit: 5 tons per year or more of lead; 250 tons per year or more of any regulated air pollutant; or 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD-major facility categories (fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants.). Projects at existing or new major stationary sources are subject to PSD preconstruction review. In addition, proposed projects at existing minor sources are subject to PSD preconstruction review if potential emissions *from the proposed project* will exceed the PSD major stationary source thresholds.

Once a project becomes subject to PSD preconstruction review, each PSD pollutant is reviewed for PSD applicability based on emissions thresholds known as the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); Fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as nonmethane organic compounds (NMOC); and mercury (Hg). Pollutant emissions from the project exceeding these rates are considered "significant"

and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The following table summarizes the applicant's potential calculated changes (increases) in actual emissions from the steam coil replacement project based on the application and the applicant's additional information

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Table A. Applicant's Projected Emission Increases (Tons per Year) and PSD Applicability

Pollutant	Projected Increases	PSD Significant Emissions Rate	Subject to PSD?
SO_2	1.0	40	No
NO_X	22.0	40	No
CO	18.4	100	No
PM	12.8	25	No
PM_{10}	9.8	15	No
$PM_{2.5}$	9.2	10	No
VOC	11.4	40	No
Pb	1.3E-06	0.6	No

3. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) REVIEW

Brief Discussion of Emissions and PSD Applicability

The Department concurs with the applicant's conclusion and summary of the project. The following table presents the Departments summary of the project based upon the information presented by the applicant in the application and additional information received.

Table B. FDEP's Annual Emissions Summary (Tons per Year) and PSD Applicability

Pollutant	Baseline Actual Emissions	Projected Actual Emissions	Projected Increases	PSD Significant Emissions Rate	Subject to PSD?
PM	240.22	253.66	13.44	25	No
PM_{10}	174.45	183.59	9.14	15	No
$PM_{2.5}$	161.02	168.52	7.5	10	No

Pollutant	Baseline Actual Emissions	Projected Actual Emissions	Projected Increases	PSD Significant Emissions Rate	Subject to PSD?
SO_2	17.65	18.67	1.02	40	No
NO_x	188.52	210.48	21.96	40	No
CO	406.19	424.64	18.45	100	No
VOC	232.9	243.64	10.74	40	No
Pb	0.03	0.03	0	0.6	No

Baseline actual emissions were selected by the applicant for the 24 month consecutive period of January 2003 through December 2004. Baseline emissions were adjusted downward by the applicant to reflect the current control devices and emission limits at the facility. Projected actual emissions are based upon the maximum expected production for the next five years. Projected pollutant increases are determined by determining the difference between the baseline actual emissions and the projected actual emissions. The production may vary depending upon market demand. Since the wood veneer dryers are the bottleneck for the production process projected actual emission increases from other activities at the plant were also calculated and are included in this analysis. The project should be completed during 2012.

Based on the projections, supporting information provided by the applicant, conclusions presented by the applicant, and the emissions summary presented in Table B the Department agrees that the project does not trigger PSD preconstruction review.

Therefore, the project requires a minor air construction permit to authorize the steam coil replacements and associated appurtenances. Pursuant to Rule 62-212.300(1)(e), F.A.C., the applicant shall provide reports in summarizing actual emissions (PM, PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, and VOC) computed in accordance with the requirements of Rule 62-210.370, F.A.C. for each year during the 5-year period following completion of the project.

NSPS Applicability

A project for an existing unit may trigger the federal New Source Performance Standards (NSPS) in two ways.

1. The project is considered a modification when the project results in an increase in the hourly mass emissions rate of an NSPS-regulated pollutant. Since this project will not change the performance or increase the capacity (heat input rate, fuel consumption rate or steam generation rate) of the wood veneer dryers, the hourly mass emissions rates will not increase.
2. Pursuant to 40 CFR 60.15, a project is considered reconstruction when the fixed capital costs of the replacement components exceed 50% of the fixed capital costs for a comparable new replacement unit. The applicant presented cost data demonstrating that the expected costs for this project are significantly lower than the cost of an entirely new wood veneer dryer system. Therefore, the total project costs will be less than 50% of the cost of a comparable replacement unit and the project is not considered reconstruction for purposes of the NSPS.

The NSPS does not have a source category for Wood Product Plants (Plywood Manufacturing).

NESHAP Applicability

The facility is currently subject to the National Emission Standards for Hazardous Air Pollutants requirements in 40 CFR 63, Subpart DDDD, Plywood and Composite Wood Products, and 40 CFR 63, Subpart A, General Provisions. The facility is classified as an existing facility for purposes of the NESHAP. This project does not change that designation.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jerry Woosley is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection, Northeast District Office, 7525 Baymeadows Way, Suite 200B, Jacksonville, FL 32256-7590, Phone: 904/256-1700.