TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Georgia-Pacific Wood Products LLC
Post Office Box 322
Hosford, Florida 32334

Hosford OSB Facility
Facility ID No. 0770010

PROJECT

Project No. 0770010-014-AC
Application for Title V Source Air Construction Permit
Panel Press Upgrade

COUNTY

Liberty, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northwest District Office
160 W Government Street, Suite 308
Pensacola, Florida 32502-5740

September 26, 2012

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources 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 applicable 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 categories. 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.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

Georgia-Pacific Wood Products LLC, an oriented strand board manufacturing facility, is an existing major stationary source, which is categorized under Standard Industrial Classification Code No. 2493, Reconstituted Wood Products. The facility is located in Liberty County at 12995 Northeast State Road 65 in Hosford, Florida. The UTM coordinates of the existing facility are Zone 16, 713.5 km East, and 3369.5 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no 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

This project upgrades the panel press (EU 002) hydraulic system, which provides force to open and close the panel press during OSB production. A more sophisticated control system, variable frequency drives, and updated valves will allow for faster and smoother press openings and closings, and reduce wear on the press components. The panel press upgrade reduces the overall panel press cycle time by an estimated 13.5 seconds. This increases potential hourly emissions. The Five Flake Dryers' (EU 001) processing rate limit of 693,272 ODT/12-month rolling average, the Panel Press's (EU 001) production limit of 600 million square feet on a 3/8-inch basis oriented strandboard per consecutive 12-month period, and their hourly pollutant emissions limits are not changed in this project.

Processing Schedule

June 12, 2012 Received the application for a minor source air pollution construction permit.

July 2, 2012 Requested additional information.

July 30, 2012 Received additional information; application complete.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, 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. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 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 following 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.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to 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 (Fl); 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 non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions 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 project meets the definition of "modification" in Rule 62-210.200(205), F.A.C.,-because the project involves physical changes to the process machinery, and an increase in dryer throughput and panel production over current operating rates may result in an increase of actual emissions over the current rate. The applicant performed a PSD applicability determination by comparing baseline actual emissions to projected actual emissions with the significant emissions rates, deducting for the demand growth exclusions.

The Baseline Actual to Projected Actual Applicability Test for modifications, per Rule 62-212.400(2)(a)1., F.A.C., was used to determine that the proposed project was not considered a major modification. The baseline actual emissions (BAE) were determined using the highest average annual rate in TPY for each pollutant during a consecutive 24-month period within the 10 year period immediately prior to the proposed project. For the projected actual emissions (PAE) calculation, Rule 62-210.200(252)(c), F.A.C., states, "In determining the projected actual emissions, the Department shall exclude that portion of the units emissions following the project that an existing unit could have accommodated during the 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project including any increased utilization due to product demand growth." All of the PAEs, which are less than permit limits, can be accommodated as demand growth.

The OSB production increase related to the decrease in cycle time of the panel press was estimated using calculations of pre-project and post-project production numbers in MSF/yr, determining the difference for each of seven OSB products (board thickness in inches), and conservatively selecting the difference having the largest maximum production increase in MSF/yr. This increase was used to calculate project related emissions (PRE) increases. The demand growth exclusion from the project was calculated by PAE minus BAE minus PRE.

The following table summarizes emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant (TPY)	Potential Emissions[1]	Baseline Actual Emissions (BAE)[2]	Projected Actual Emissions (PAE)[2]	Demand Growth Exclusion (DGE)[2]	Emissions Increase[3]	Significant Emissions Rate	Subject to PSD
CO	250.20	91.81	150.22	45.91	12.50	100	No
NO_X	428.76	191.06	216.99	7.89	18.04	40	No
PM	351.13	133.61	157.29	11.43	12.25	25	No
PM_{10}	329.80	119.68	141.84	11.23	10.93	15	No
$PM_{2.5}$	300.58	105.29	125.62	10.77	9.56	10	No
SO_2	23.05	16.40	18.38	0.35	1.63	40	No
VOC	594.40	135.94	182.25	31.03	15.28	40	No
CO_2e	174646	23509	51157	23065	4583	75,000	No

1 Facility Potential to Emit, from table on page 1 of 11, construction permit application report dated 6/2012.
2 BAE, PAE and DGE from Table 4-5, PSD Applicability Analysis, updated calculations dated 7/24/2012
3 Emissions Increase = PAE – BAE – DGE

This facility is a major stationary source for PSD because it has the potential to emit 250 TPY or more of CO, NO_X, PM, PM_{10}, $PM_{2.5}$ and VOC. As shown in the above table, the projected emissions increases do not exceed the significant emissions rates defined in Rule 62-210.200. Based on these facts is it determined that the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Application Fee

This is a Title V facility, exempt from permitting fees, subject to annual emissions fees.

Discussion of Emissions

The project involves physical changes to the process machinery that may decrease the panel press cycle time by up to 13.5 seconds and thus can result in higher hourly emissions. However, it must be noted that the increase in

actual emissions is probably due as much or more to a projected increase in dryer throughput and panel production over current operating rates.

The material processing rates and BACT/MACT determination hourly emissions limits in the current operating permit 0770010-012-AV for the dryers and the panel press were originally set in permit 0770010-002-AC PSD-FL-282A (PSD-FL-282A). Construction permit 0770010-014-AC does not request any changes in the dryers' or panel press' process rates or the hourly emissions limits in permit 0770010-012-AV. The facility has not exceeded, does not plan to exceed, and is not seeking a change in, the existing permitted operating rates or pollutant lbs/hr limits established by permit PSD-FL-282A. The facility has been operating well below the PTE established by permit PSD-FL-282A.

The dryers have a permitted operating rate limit of 693,272 ODT/yr. The facility has been operating the dryers at a rate of 452,395 ODT/yr and they wish to operate the dryers at a rate of 461,947 ODT/yr. Since they will be drying more wood chips per hour they expect hourly emissions to increase accordingly at this emissions unit.

The panel press has a permitted operating limit of 600 MMSF 3/8" basis panels per 12 month period. The physical changes to the press motive components and controls may allow them to reduce the overall press cycle time by an estimated 13.5 seconds per cycle. The facility has been operating the press at a rate of 503.1 MMSF/y and they wish to operate the press at a rate of 508.327 MMSF/yr. Since they will be able to produce more panels per hour they expect hourly emissions to increase accordingly at this emissions unit.

Both emissions units have BACT/MACT determination lb/hr limits for PM/PM_{10}, NO_X, CO and VOC. Emissions testing for the dryers and the panel press have shown actual hourly emissions to be well below the permitted hourly limits in PSD-FL-282A. The projected actual emissions after the panel press system upgrades will be less than the PTE established by PSD-FL-282A.

The application's projected potential emissions do not take into account the limiting effects of the ODT/yr or the MMSF/yr limits of PSD-FL-282A.

Comparison of Emissions; Potential per PSD-FL-282A, and Baseline and Projected Actuals Presented in Application 0770010-14-AC

Pollutant TPY	Potential[1], PSD-FL-282A 693272 ODT/yr 600 MMSF/yr, 3/8" basis	Baseline Actual[2] 452395 ODT/yr 501.3 MMSF/yr, 3/8" basis	Projected Actual[2] 461947 ODT/yr 508.327 MMSF/yr, 3/8" basis
CO	395.9	91.81	150.22
NOx	449.6	191.06	216.99
PM	296.8	133.61	157.29
PM10	296.8	119.68	141.84
PM2.5	-	105.29	125.62
VOC	413.0	16.40	18.38
SO2	33.6	135.94	182.25

1 Potentials to Emit from PSD-FL-282A are based on permit limits of 693,272 ODT/yr of flaked wood through the dryers, 600 MMSF/YR of OSB on a 3/8" basis from the panel press and hourly emissions limits and factors.

2 Baseline and Projected Actual Estimates base on actual stack test lbs/hr data times 8760 hrs/yr. these numbers do not take into account the limits on ODT/yr of flaked wood through the dryers or the limits on MMSF/YR of OSB by permit PSD-FL-282A.

State Requirements

State requirements in current Title V permit 0770010-012-AV, effective November 4, 2011, are not changed by this project.

Federal NSPS Provisions

Federal NSPS provisions in current Title V permit 0770010-012-AV, effective November 4, 2011, are not changed by this project.

Federal NESHAP Provisions

Federal NESHAP provisions in current Title V permit 0770010-012-AV, effective November 4, 2011, are not changed by this project.

Other Draft Permit Requirements

40 CFR 64 CAM requirements for Five Flake Dryers (EU 001), Panel Press (EU 002) and Thermal Heater System (EU 011) may need to be updated. Permittee will investigate and provide changes if needed.

This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C., for several pollutants. The project does not increase the design capacity or the potential to emit a PSD pollutant over amounts previously established by permit 0770010-002-AC PSD-FL-282A. Therefore, actual emissions reporting pursuant to Rule 62-212.300(1)(e), F.A.C., will be required for total PM, PM_{10} and $PM_{2.5}$, for a period of five years following resumption of regular operations after the changes due to the project take effect.

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. Rick Prusa 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 850.595.0634 or rick.prusa@dep.state.fl.us.