

ATTACHMENT GP-EU12-F5
Georgia Pacific
Palatka Mill
Best Management Practices (BMP)
For
Bark Handling System

This BMP Plan is being submitted as required by Specific Condition F.4. of Permit No. 1070005-028-AC/PSD-FL-341 issued on January 5, 2005. The purpose of this best management practice plan is to minimize fugitive volatile organic compounds (VOC) from being released from bark handling and storage piles.

The GP Palatka Mill consists of the following major plant areas: chip mill, chip yard, digester system, brown stock washing system, bleaching system, chemical recovery area, paper drying/converting/warehousing, and power/utilities area.

Bark Handling System Description

GP currently operates the Bark Handling System, which provides bark/wood fuel to the No. 4 Combination Boiler. The Bark Handling System includes a Bark “Hog” which crushes oversized pieces of wood chips/bark before being fed to the boiler.

Bark/wood is transferred to the No. 4 Combination Boiler through the Bark Handling System. Bark/wood is delivered to the Bark Handling System by two different means. The first is by transfer from the mill’s chip mill. The second method is through purchasing bark/wood from off-site sources.

Bark/wood is transferred from the chip mill to the Transfer Tower by a covered conveyor. The material is then conveyed by covered conveyor to the Hog Tower. In the Hog Tower, the material is screened. The oversized, large pieces of bark/wood are fed to the existing Bark Hog, which crushes the bark/wood into smaller particles. On-size material bypasses the Bark Hog.

The purchased bark/wood is delivered by trucks, and dumped onto a staging area by means of a hydraulic truck dumper. A front-end loader then transfers the delivered material to the chip

yard's bark/wood storage pile. The bark/wood is then transferred to the Transfer Tower and then to the Hog Tower through a series of conveyors and chutes. This material is also sent through the screen, where oversized material is separated from on-size material, and the oversize material is routed to the existing Bark Hog.

The bark/wood from the Bark Hog along with on-size material is then transferred by conveyor to a storage silo, and is then pneumatically conveyed to the No. 4 Combination Boiler. A cyclone is used in the pneumatic conveying system in order to separate the bark/wood from the conveying air stream. This cyclone is located on top of the No. 4 Combination Boiler building.

GP operates the No. 4 Combination Boiler to provide steam to the process and the turbine generators that provide electricity for the facility. The No. 4 Combination Boiler is permitted to burn the following fuels and gases:

- Carbonaceous fuel such as tree bark and wood fuel (supplied from the Bark Handling System).
- No.6 fuel oil with a sulfur content that shall not exceed 2.35% by weight and on-spec used oil.
- Natural gas as a startup fuel. The natural gas may be kept on pilot for flame safety.
- Non-condensable gases (NCGs), dilute non-condensable gases (DNCGs), and/or stripper off-gases (SOGs) during periods when the boiler is being utilized for their destruction.

The No. 4 Combination Boiler is currently permitted to operate up to a maximum heat input rate of 512.7 million British thermal units per hour (MMBtu/hr) for carbonaceous fuel burning (24-hour average). Based on a heat content of 4,500 British thermal units per pound (Btu/lb), this heat input rate is equivalent to a maximum bark/wood burning rate of 57 tons per hour (TPH) and 499,320 tons per year (TPY). The maximum No. 6 fuel oil burning rate for the boiler is 418.6 MMBtu/hr. Based on a heating value for No. 6 fuel oil of 150,000 Btu/gal, this heat input rate is equivalent to 2,791 gal/hr of fuel oil.

Best Management Practices (BMP)

GP utilizes covered conveyors to minimize fugitive particulate emissions from transfer of bark.

VOC emissions from bark occur primarily from the storage piles. The National Council for Air and Stream Improvement (NCASI), in Technical Bulletin No. 723 (1996), has studied VOC

emissions from wood/bark storage. The laboratory studies conducted showed VOC emission rates were high during the first two days of exposure, but decreased sharply thereafter, when measured over about a ten-day period. It is therefore concluded that minimizing the storage time of fresh wood/bark will minimize VOC emissions from wood/bark storage.

To minimize the release of VOC emissions from storage piles of bark, GP burns as much fresh bark in No. 4 Combination boiler as possible. Burning fresh bark minimizes VOC emissions by reducing the amount of time the bark is exposed to the atmosphere.

As stated above, the maximum bark/wood burning rate is 57 tons per hour (TPH) and 499,320 tons per year (TPY). GP tracks and records the amount of bark burned in the No. 4 Combination Boiler.