Title V Air Operation Permit Revision
Permit No. 0050009-035-AV

APPLICANT

The applicant for this project is RockTenn CP, LLC. The applicant's responsible official and mailing address are: Mr. Pedro Fuster, General Manager, RockTenn CP, LLC, One Everitt Avenue, Panama City, Florida 32402.

FACILITY DESCRIPTION

The applicant operates the Panama City Mill, which is located in Bay County at One Everitt Avenue in Panama City, Florida.

This facility is a Kraft pulp and paper mill that consists of major activities areas such as: wood handling, pulping, bleaching, chemical recovery, power house, paper machines, and associated processes and equipment.

No. 3 Combination Boiler burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, natural gas and/or No. 2 fuel oil or No. 6 fuel oil. The No. 3 Combination Boiler serves as a control device for the condensate stripper off-gases (SOG) and as a backup control device to the Lime Kiln for the non-condensable gases (NCG) from the Multiple Effects Evaporator (MEE) System and from the batch digesting system (BDS). Particulate matter (PM) emissions are controlled by a fly ash arrestor, followed by a variable throat venturi wet scrubber. Sulfur dioxide (SO_2) emissions are controlled by limiting the sulfur content of the fuel oil to a maximum of 2.4% by weight and are monitored by a SO_2 CEMS. Total reduced sulfur (TRS) emissions and Hazardous air pollutant (HAP) emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel, or with the combustion air. This boiler is regulated by Rule 62-296.410, F.A.C. - Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C. - Kraft Pulp Mills and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

No. 4 Combination Boiler burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, coal, natural gas, and/or No. 2 fuel oil or No. 6 fuel oil. The No. 4 Combination Boiler serves as a control device for the SOG and as a backup control device to the Lime Kiln for the NCG from the MEE System and from the BDS. PM emissions are controlled by a fly ash arrestor followed by a wet scrubber. HAP and TRS emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel, or with the combustion air. This boiler is regulated by Rule 62-296.410, F.A.C., Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

No.1 and No. 2 Recovery Boilers each have a maximum heat input of 721 MMBtu/hr, equivalent to 123,700 lb/hr of black liquor solids (BLS) assuming 5,830 Btu/lb of BLS. Natural gas, No. 2 fuel oil, or No. 6 fuel oil with a maximum of 2.5% sulfur by weight may be used as backup or supplemental fuels. Electrostatic precipitators control PM emissions. TRS emissions are monitored with a CEMS. The recovery boilers are regulated by Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources.

No. 1 and No. 2 Smelt Dissolving Tanks dissolve smelt in weak wash to yield green liquor. Operating rates are limited by the operating rate of each Recovery Boiler. PM emissions are controlled by venturi scrubbers. TRS emissions are controlled using weak wash as the scrubber media. The weak wash scrubber flow is monitored as a surrogate compliance parameter. The smelt dissolving tanks are regulated by Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources.

The Lime Kiln burns petcoke with up to 8.0% sulfur as the primary fuel, blended with natural gas, or No. 2 fuel oil, or No. 6 fuel oil with a maximum of 2.4% sulfur by weight. The maximum heat input rate for the petcoke burner system is 180 MMBtu per hour. For flame stability, petcoke is co-fired with fuel oil or natural gas and constitutes

up to 90% of the maximum heat input rate to the Lime Kiln. The Lime Kiln has a maximum operating rate of 85,000 pounds per hour of lime mud and is the primary control device to thermally destroy the NCG from the MEE System and from the BDS. TRS, SO_2, nitrous oxide (NO_X), and PM emissions are controlled by a venturi wet scrubber manufactured by Chemico, followed by a cyclone. SO_2 emissions are monitored with a CEMS. The Lime Kiln is regulated by 40 CFR 64 - CAM plan for SO_2, 40 CFR 60 Subpart BB - Kraft Pulp Mills, and Rule 62-296.404, F.A.C.

The Multiple Effects Evaporator (MEE) System consists of a Pre-Evaporator, the No. 1A Evaporator set, the No. 3 Evaporator set, and associated equipment. The No. 1A Evaporator set and the No. 3 Evaporator set include two four-stage MEE systems and associated condensers, hot wells and concentrators. The evaporators are used to concentrate the weak black liquor prior to firing in the recovery furnaces. The maximum operating rate is 359,400 pounds of dry black liquor solids per hour. The off-gases (TRS/HAP/VOC) from these sources are collected in the low volume high concentration (LVHC) NCG collection system. The NCG gases are primarily controlled by incineration in the Lime Kiln or in the No. 4 Combination Boiler or the No. 3 Combination Boiler as backup. The MEE system is regulated by Rule 62-296.404, F.A.C., 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

The Digester System consists of 22 batch digesters, 5 blow tanks, an accumulator tank with both an upstream and a downstream condenser, and a turpentine recovery system (decanter, condenser and storage tank). The off-gases (TRS/HAP/VOC) from these sources are collected in the LVHC NCG collection system. TRS/HAP/VOC emissions are primarily controlled by incineration in the Lime Kiln or in the No. 4 Combination Boiler or the No. 3 Combination Boiler as backup. The digester system is regulated by Rule 62-296.404, F.A.C., 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

The Bleaching System has a maximum process capacity of 1,250 tons per day of air dried unbleached pulp (ADUP). The facility has a 40-ton per day chlorine dioxide generator and associated chlorine dioxide storage tank. The bleaching towers have been modified to allow for a 100 percent chlorine dioxide substitution capability to comply with MACT standards. HAP/VOC emissions from the bleach plant are controlled with a wet alkaline (using weak wash or white liquor) scrubber. A closed vent system is used to collect HAP/VOC emissions from the washers, the towers, and the filtrate tanks where chlorine or chlorinated compounds are used and then, subsequently, treated in the scrubber. The chlorine dioxide storage tank is vented to the chlorine dioxide plant scrubber. The bleaching system is regulated by 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

The Pulping System collects LVHC NCG from the turpentine decanter, the turpentine condenser, the turpentine storage tank, the foul condensate storage tank blow heat recovery, multiple effect evaporators and the batch digester system, which are primarily combusted in the Lime Kiln or in the No. 4 Combination Boiler or the No. 3 Combination Boiler as back-up. A steam-heated condensate stripper treats the foul condensate streams from the blow heat accumulator tank, the turpentine system, the pre-evaporator, and the NCG system. The stripper system has a design capacity of 500 gallons per minute and consists of the following equipment: a foul condensate storage tank, a fiber filter, a stripper feed preheater, a condensate stripper, a primary reflux condenser and a trim condenser. The non-condensed vapors from the reflux condenser are routed to the trim condenser and finally to the No. 3 Combination Boiler or the No. 4 Combination Boiler for thermal destruction. The pulping system is regulated by 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

The Lime Slaker reacts lime (CaO) from the Lime Kiln and green liquor (Na_2CO_3, Na_2S, and Na_2SO_4) to form white liquor (NaOH and Na_2S) used for cooking wood chips. Lime mud is formed as a byproduct that is recovered and regenerated to lime in the Lime Kiln. The maximum operating rate is 81.6 tons per hour of green

liquor solids and lime (60.39 tons per hour green liquor and 21.18 tons per hour lime). PM emissions are controlled by a wet walled cyclone scrubber. The lime slaker is regulated by Rules 62-296.404, F.A.C., Kraft Pulp Mills and 62-296.320, F.A.C., General Pollutant Limiting Standards.

Petcoke Handling and Storage receives ground petcoke by truck and/or rail car, which is pneumatically conveyed to a 250-ton ground petcoke storage silo with a baghouse to control PM emissions. The ground petcoke is dropped from the storage silo into a weigh bin then transferred in an enclosed conveyor to the Lime Kiln. A blower and an eductor are used to deliver the ground petcoke to the kiln burner. Displaced air from the weigh bin is redirected to the storage silo with a baghouse. Petcoke handling and storage is regulated by Rule 62-296.320(4)(b)1 & 4, F.A.C. - General Pollutant Emission Limiting Standards.

The Methanol Storage Tank has a 38,500-gallon storage capacity and is equipped with a vertical, fixed roof and a flame arrestor. A nitrogen blanket flows over the methanol in the tank. The annual throughput is 707,879 gallons per year with HAP potential emissions of 1.27 tons per year. The methanol storage tank is no longer regulated by 40 CFR 60 Subpart Kb - Volatile Organic Liquid Storage Vessels, and is being placed in the facility's list of insignificant emission sources.

The Wood Yard receives hardwood chips, softwood chips, round wood (as short wood or long wood), scrap wood, and bark. Scrap wood and bark (as received or generated on-site by debarking round wood) are used in steam generation. The chipping process begins by passing logs through a debarker to remove bark, which is collected and transferred via conveyors and hogged to obtain a desired size. After processing, the bark is stored in piles, transferred to the bark bin, and then used as a fuel for the boilers at the facility. The logs are then chipped and the chips screened for proper size. Both purchased chips and manufactured chips are conveyed and stored in chip reclaimer storage piles. The facility has one softwood chip reclaimer storage pile and one hardwood chip reclaimer storage pile. Three cyclones associated with the bark transfer and conveying system are used to pneumatically convey the bark and to control PM emissions. Conveyors are covered and roads are paved and maintained to minimize PM entrainment. Four cyclones are used in the Screening Room to separate fines from the conveying air stream and to control PM emissions. The wood yard is regulated by Rule 62-296.320(4)(b)1 & 4, F.A.C. - General Pollutant Emission Limiting Standards.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to revise the existing Title V permit for the above referenced facility. This revision incorporates the changes from 00500099-034-AC, combining the previous wood yard separate limits of 1,946,934 tons per year of round wood and 1,524,600 tons per year of purchased chips into a total throughput limit of 3,471,534 tons of round wood and purchased chips per year.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for a Title V Air Operation Permit Revision received October 5, 2012.
Notice of Intent to Issue Air Permit issued December 11, 2012.

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) applies to Emissions Unit 015 (No. 3 Combination Boiler) for PM (fly arrestor and wet scrubber) and SO_2 (wet scrubber), Emissions Unit 016 (No. 4 Combination Boiler) for PM (fly arrestor and wet scrubber) and SO_2 (wet scrubber), Emissions Unit 001 (No. 1 Recovery Boiler) for TRS (two-stage heavy black liquor oxidation system), Emissions Unit 019 (No. 2 Recovery Boiler) for TRS (two-stage heavy black liquor oxidation system), Emissions Unit 004 (Lime Kiln) for SO_2 (venturi scrubber), and Emissions Unit 005 (Lime Slaker) for PM (wet cyclonic scrubber).

PROJECT REVIEW

This revision combines the wood yard limit for round wood and purchased wood chips. The current permitted wood yard limit is 1,946,934 tons per year of round wood and 1,524,600 tons per year of purchased chips. The new wood yard limit is a total of 3,471,534 tons per year of round wood and purchased wood chips.

CONCLUSION

This project revises Title V air operation permit No. 0050009-032-AV, which was effective on October 18, 2010. This revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.