Title V Air Operation Permit Revision
Permit No. 0890003-037-AV

APPLICANT

The applicant for this project is RockTenn CP, LLC. The applicant's responsible official and mailing address are: Mr. Allen Sanders, General Manager, RockTenn CP, LLC, P.O. Box 2000, Fernandina Beach, Florida 32035.

FACILITY DESCRIPTION

This facility is a fully integrated Kraft linerboard mill that consists of major activities areas such as: wood yard, pulp mill, recycle plant, chemical recovery, powerhouse and paper mill. The facility also includes the onsite Boxplant, which prints and converts linerboard into corrugated containers or other finished products.

Woodyard:

The Woodyard supplies wood chips and bark to the mill from logs and purchased chips. Southern Yellow Pine is received as logs and/or chips by rail cars and/or trucks. The logs are debarked and chipped and the chips are classified through screens according to thickness. The chips are conveyed from the chip piles to the Batch and Kamyr digester systems.

Digesting Systems and Brownstock Washing Systems:

The Batch Digester System consists of (8) batch digesters, (2) Blow Tanks, and a Turpentine Recovery System. Wood chips, cooking solution consisting of caustic sodium hydroxide and sodium sulfide (known as white liquor), and Black Liquor (weak wash from 1st stage filtrate tank), are loaded into to the digesters. Each loaded digester is then placed under high temperature and pressure using steam. The cooking solution digests the wood chips and the lignin is chemically separated from the cellulose. During cooking, Noncondensible gases are vented into the Turpentine Recovery System. From the digesters, the cooked pulp and spent cooking solution (now known as black liquor) are blown to atmospheric pressure into either A-Line Blow Tank or B-Line Blow Tank. Digesters 1, 2, and 3, are blown into A-Line Blow Tank, while Digesters 5, 6, 7, and 8 are blown into the B-Line Blow Tank. Digester 3 or 4 can be blown into either blow tank. The pressure reduction helps with separation. Vent gases from the blow tanks are routed to the blow heat recovery system discussed below.

The Kamyr Digester System consists of a chip steaming tank, the Kamyr continuous digester, (2) flash tanks, the Kamyr Blow Tank, and a Turpentine Recovery System (Kamyr Cyclone, 2 Primary Condensers, Secondary Condenser, Tertiary Condenser or NCG Cooler, the Turpentine Decanter, and the East and West Turpentine Storage Tanks).

Wood chips are fed from the chip bin through a low-pressure feeder into a steaming vessel where steam (flashed from the No. 1 Flash Tank – residual liquor) preheats the chips and drives off air and Noncondensibles. The Noncondensible gases are routed to the Turpentine Recovery System. The chips then fall into a chute connected to a high-pressure feeder.

The feeder consists of a single rotating element having a series of staggered pockets. Each pocket picks up chips and white liquor is added to form chip slurry. The chip slurry is then routed to the Kamyr digester inlet. White liquor is added to the Kamyr digester to chemically separate the lignin from the cellulose. The cooked pulp moves downward through the different zones of the digester. The hot residual liquor is extracted through screens on the edges of the Kamyr and into the No. 1 Flash tank, which supplies steam to the steaming vessel. The hot spent cooking solution is displaced from the cooked pulp near the bottom of the digester with upward-flowing filtrate from the Kamyr brown stock washer system (weak wash from the 1st stage Kamyr Filtrate Tank). The cooked pulp is continuously removed by slowly rotating paddles and then blown at a controlled rate into the Kamyr Blow Tank.

From the Kamyr Blow Tank, the pulp is processed through fibrilizers to remove any knots and tailings (uncooked, woody materials). After passing through the fibrilizers, the cooked pulp is refined. Material rejected from the screening operation is returned to the Kamyr Surge Tank. The remaining pulp is screened and refined through a series of screens and refiners. The fibrilizers and screens do not vent to the atmosphere. The pulp is then pumped to the Kamyr washer sets (two identical washer sets consisting of two vacuum drum per washer set) where the pulp is washed with shower water to displace the spent cooking solution (black liquor). The washed pulp is stored in tanks for use on the paper machines. The recovered black liquor is sent to liquor storage before being sent to the multiple effect evaporators.

From the A-Line and B-Line Blow Tanks, the pulp follows a similar process of refining, screening and washing, however pulp from the A-Line Blow Tank is sent to the A-Line Brownstock Washing System, while pulp from the B-Line Blow Tank is sent to either the B-Line Brownstock Washing System or the C-Line Brownstock Washing System. The A and B-Line Brownstock Washing Systems are identical counter flow, vacuum drum washer sets consisting of four washer drums per set. Segregated evaporator condensate and white water is used as shower water on the last stage of washing. The filtrate from each drum stage flows by gravity to a filtrate tank and is used on the prior drum as shower water. The filtrate from the first stage drum is sent to the multiple effect evaporators. The C-Line Brownstock Washing System is described below.

Blow Heat Recovery:

Gases from the A-Line and B-Line Blow Tanks pass through its own cyclone to remove any entrained black liquor, which is sent back to its respective blow tank. The gases then combine and enter a primary condenser. The condensed gases are routed to the Blow Heat Accumulator where they are further condensed by recirculated mill process water. The collected condensate is routed to the Foul Condensate Collection Tank followed by treatment in the Waste Water Treatment System. The uncondensed gases from the primary condenser are routed to the secondary condenser for Turpentine Recovery. The remaining uncondensed gases are routed to the LVHC collection system and No.4 Lime Kiln or No. 5 Power Boiler for destruction.

Black Liquor and Chemical Recovery:

The recovered black liquor from the Kamyr wash line, and filtrate from the A and B Line washers, is pumped to the multiple effect evaporators (MEE) to remove the excess water and increase the black liquor solids content. During the evaporation process, a soaplike substance is collected from the black liquor by a skimmer and is pumped to the Tall Oil Plant for further processing. The mill operates two, MME systems, the Nos. 5 and 6.

The concentrated black liquor is further concentrated into strong black liquor in one of four concentrators before being burned in the Nos. 4 or 5 Recovery Boilers. The black liquor contains organics extracted from the wood and inorganic chemicals. The organics are burned as fuel in the recovery boilers to produce steam while the inorganics (sodium salts) fall to the floor of the boiler and are recovered as smelt (molten ash). The smelt is tapped from the bottom of the recovery boiler and sent to the Smelt Dissolving Tanks (Nos. 4 and 5) where it is dissolved in mill process water and weak wash from the recausticizing area. The reaction forms a mixture of sodium carbonate and sodium sulfide (green liquor).

Recausticizing and Lime Recovery:

The green liquor is pumped to the green liquor clarifier where the dregs are removed from the green liquor. The inorganics in the clarified green liquor are recovered in the slaker.

In the slaker, lime (purchased or reburned from the lime kiln) is added to the green liquor causing a reaction (causticizing), forming a sodium hydroxide and calcium carbonate mixture. The mixture is sent to the white liquor clarifiers where the calcium carbonate (lime mud) precipitates. The causticized liquor that is separated from the lime mud is now known as white liquor. This white liquor is then reused in the pulping process as the cooking liquor in the Batch Digester and Kamyr Digester Systems.

The lime mud is removed from the white liquor clarifiers and is sent to the lime mud washers. The resulting filtrate is used to dissolve the smelt in the smelt dissolving tanks. The washed lime mud is sent to a filter before being calcined in the No. 4 Lime Kiln to recover the lime for re-use in the green liquor causticizing stage at the slaker.

Paper Machines:

The washed pulp is sent to storage or onto one of the mill's two paper machines where sheets are formed by draining water from the pulp slurry over a moving wire. Additional water is removed by passing the pulp sheet over pressing and drying cylinders heated internally with steam. The pulp sheet is then transported to the finishing room where the pulp sheet is cut into smaller rolls or sheets based on customer specifications.

Secondary Fiber Pulp Plant (Recycle Plant):

Post consumer cardboard, (Old Corrugated Cardboard) is mixed with water to produce a slurry of paper fiber and water in the Hydropulper. The pulp is diluted prior to being screened and cleaned. The cleaned pulp is thickened and either stored or sent onto one of the mill's two paper machines.

Boilers:

The steam needed for mill operations is produced in the power boilers and the recovery boilers. Steam is also used to produce the mill's electricity needs. The boilers at the mill are described below.

40 CFR 63 Subpart S Applicability

This facility is subject to the requirements of 40 CFR 63 Subpart S. The facility uses the No. 4 Lime Kiln and the No. 5 Power Boiler as the control devices to meet the requirements of 40 CFR 63.443 for the Low Volume High Concentration sources.

The facility uses the UNOX biological treatment system to control HAP emissions in condensates as required in 63.446 and 63.453. All of the pulping process condensates from the 63.446 named sources are collected in a closed condensate collection system and hard piped directly to the UNOX reactor to prevent the release of HAPs to the atmosphere.

At the UNOX reactor, the collected process condensate is split between the three UNOX reactor trains and mixed with process wastewater after the wastewater enters the UNOX reactor. Biological organisms in the activated sludge in the reactor consume the HAPs in the condensate.

The UNOX oxygen feed flow and UNOX vent gas purity is continuously monitored. These parameters are used as indicators of system upsets and malfunctions that would ultimately cause a reduction in wastewater dissolved oxygen, and therefore treatment efficiency.

Because the UNOX system is different from "open" and "closed" biological systems as described in Subpart S, EPA approved an alternative method of demonstrating compliance with the Subpart standards. The facility utilizes the Condensate Compliance Plan as amended March 5, 2001.

The secondary fiber pulping operation has a maximum capacity of 500 ODTUP/Day recycle material production. There are no controls required by 40 CFR Subpart S for secondary fiber pulping operations.

The facility complies with the Clean Condensate Alternative (CCA) standards in 40 CFR 63.447 as an alternative to compliance with the 40 CFR 63.443 standards for the High Volume Low Concentration (HVLC) sources specified within the Subpart. The CCA option requires Kraft mills to reduce HAP emissions from affected sources by an amount greater than or equal to the emission reductions achieved by the collection and treatment of HAP emissions from HVLC sources included in Phase II of the Subpart. Emission reductions are calculated by comparing HAP emissions from affected sources under CCA with HAP emissions under a baseline condition as defined in the Subpart.

In the EPA CCA guidance document dated April 8, 2004, it was indicated that wastewater treatment plants are "affected" sources under the CCA. The mill's CCA is the replacement of the direct-contact, wastewater treatment cooling tower with a non-contact heat exchanger system. Four sets of plate and frame heat exchangers, designed to handle the mill's wastewater flow, were installed. The existing wastewater cooling tower was modified to recirculate non-contact cooling water through the heat exchangers to provide the necessary cooling of the effluent. The removal of process effluents from the cooling tower results in the elimination of total HAP emissions from this source.

COMPARISON OF METHANOL EMISSIONS AND EMISSION REDUCTIONS OF HVLC AND CCA

	Methanol Emissions (lb/ODTP)			**Reductions (lb/ODTP)**	
	Baseline	HVLC Control	CCA Project	HVLC Control	CCA Project
BSW Systems [a]	0.28	0.006[b]	0.28	0.274[b]	---
Cooling Tower	0.76	0.76	0	---	0.76
UNOX Reactor Vents	0.000014	0.000014	0.0000012	---	0[c]
Secondary Clarifiers	0.0027	0.0027	0.0004	---	0[c]
Total	1.043	0.769	0.28	**0.274**	**0.76**

[a] The mill's HVLC sources are the Kamyr Line Brownstock Washers (two identical vacuum drum BSWs), Batch A & B line BSWs (two identical drum BSWs), C-Line BSW (two stage combination drum/diffusion BSW). Methanol emissions from testing conducted October 4-5, 2005.

[b] 98% control required under 40 CFR 63.443. Emissions =0.02 x 0.28 = 0.006 lb/ODTP. Emission reductions =0.28 – 0.006= 0.274 lb/ODTP

[c] The 15 day Initial Performance Test (IPT) on the CCA system on conducted on December 5, 2006 demonstrated that the methanol emissions did not increase as could have been expected from the increased methanol loading caused by removing the WWT cooling tower. Therefore the reductions in methanol emissions for the CCA project are conservatively assumed to be 0 lb/ODTP.

40 CFR 63.453 requires that a CMS be installed and operated to ensure compliance with the CCA. The mill maintains the manual wastewater bypass valve in the closed position. It is secured with a lock-tie device and tag. Documentation of valve movement is used to establish that process wastewater does not pass through the wastewater cooling tower. The mill also uses the UNOX reactor operating parameters of oxygen feed rate and average vent gas purity (same as 63.466 continuous compliance parameters).

40 CFR 63 Subpart KK Applicability

In accordance with the applicability of the subpart, specifically 63.820(a)(1) an existing facility that is a major source of hazardous air pollutants (HAP) at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated are subject to the subpart.

The corrugated box plant is co-located with the mill (a major source of HAP). The box plant operates a wide-web (18 inches or more in width) flexographic printing operation.

In accordance with 63.821(b), each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with specific criteria on and after the applicable compliance date of the subpart is subject only to the usage and initial notification requirements of the Subpart.

The mill elected to comply with the specific criteria of the Subpart, which is stated within the Title V Permit.

40 CFR 63 Subpart MM Applicability

The No.4 Recovery Boiler, No. 5 Recovery Boiler, No. 4 Smelt Dissolving Tank, No. 5 Smelt Dissolving Tank, and the No. 4 Lime Kiln are subject to the requirements of 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi chemical Pulp Mills.

Emissions Units Descriptions

No. 5 Power Boiler (Emissions Unit No. 006):

Particulate matter emissions, including the fly ash, are controlled by a multiple cyclone (without fly ash reinjection), followed by an electrostatic precipitator. The multiple cyclone is manufactured by Barron Industries, contains 64 tubes in the assembly, and has an estimated control efficiency of 75%.

The electrostatic precipitator is a single chamber, 3-field, ESP manufactured by Research Cottrell. The estimated control efficiency is 94%.

The total maximum operational heat input of this emissions unit is 805 MMBtu/hr. This emissions unit may burn carbonaceous fuel and No. 6 fuel oil in any combination or 100% No. 6 fuel oil. The No. 6 fuel oil may contain on-specification used oil. No. 2 fuel oil may also be fired in any combination with other permitted fuels or 100% No. 2 fuel oil. Wastewater wood fiber residuals collected from the wastewater treatment system (primary and secondary clarifiers), via the sludge press are also burned in this boiler as a fuel source.

Low volume, high concentration (LVHC) Noncondensible gases (NCG) from the batch digester system, continuous digester system, turpentine recovery system, evaporator systems, and foul condensate collection tank are collected and burned in this boiler as the backup control device to the No. 4 Lime Kiln for compliance with 40 CFR 63, Subpart S.

The permitting of this boiler was completed as a part of the C-Line BSW and the No. 8 Batch Digester System (Construction Permit Nos. AC45-190382 and AC45-190383). The No. 5 Power Boiler had not been permitted up to that point in time. It was considered to be an existing source and it was determined that a modification or reconstruction had not occurred, therefore, it was not subject to a NSPS requirement.

This emissions unit is subject to CAM requirements, Rule 296.410, F.A.C. –Carbonaceous Fuel Burning Equipment; Rule 62-296.404, F.A.C. – Kraft Pulp Mills; Rule 62-296.405, F.A.C. – Fossil Fuel Steam Generators with More Than 250 Million Btu Per Hour Heat Input; and 40 CFR 61 Subpart E-National Emission Standard for Mercury.

No. 4 Recovery Boiler (Emissions Unit No. 007):
This recovery boiler is an 852 MMBtu/hr heat input boiler designed to burn a maximum of 137,500 pounds per hour of black liquor solids. This emissions unit shall be fired with Black Liquor Solids (with or without HCE addition) and/or No. 6 fuel oil. The No. 6 fuel oil may contain on-spec used oil provided the on-spec used oil meets the requirements of Subsection L. The maximum sulfur content in the No. 6 fuel oil, prior to any blending with on-spec used oil, shall not exceed 2.5% by weight. The No. 6 fuel oil may be fired during periods of startup, shutdown and malfunction. If the No. 6 fuel oil contains on-spec used oil, the on-spec used oil must meet the requirements of Condition L.2.1. in order to be fired during periods of startup, shutdown or malfunction. This emissions unit may also be fired with a mixture of virgin ultra low sulfur fuel (No. 2 fuel oil) with black liquor such that up to one (1) gallon per minute with a maximum sulfur content of 15 parts per million (0.0015 percent) of the virgin ultra low sulfur No. 2 fuel oil is fired in the mixture with black liquor solids. The total virgin ultra low sulfur No. 2 fuel oil usage shall be offset by a reduction of two (2) gallons of BLS at 66% solid solution from the maximum permitted input for each one (1) gallon of No. 2 fuel oil used. The virgin ultra low sulfur diesel fuel shall be pumped into the black liquor lines directly from tanker trucks. Adequate spill protection shall be in place at all times around the tanker trucks and connection system to the black liquor lines . The No. 2 fuel oil may be fired during periods of startup, shutdown and malfunction. An electrostatic precipitator manufactured by

Environmental Elements is used to control particulate emissions with a design efficiency of 99%. TRS emissions are monitored with a CEM system. A COMS is also operated as a

requirement of 40 CFR 63 Subpart MM. This emissions unit is regulated under Rule 62-296.404, F.A.C., Kraft Pulp Mills, and 40 CFR 63, Subpart MM.

No. 5 Recovery Boiler (Emissions Unit No. 011):

This recovery boiler is a 972 MMBtu/hr heat input boiler designed to burn a maximum of 156,780 pounds per hour of black liquor solids. This emissions unit shall be fired with Black Liquor Solids (with or without HCE addition) and/or No. 6 fuel oil. The No. 6 fuel oil may contain on-spec used oil provided the on-spec used oil meets the requirements of Subsection L. The maximum sulfur content in the No. 6 fuel oil, prior to any blending with on-spec used oil, shall not exceed 2.5% by weight. The No. 6 fuel oil may be fired during periods of startup, shutdown and malfunction. If the No. 6 fuel oil contains on-spec used oil, the on-spec used oil must meet the requirements of Condition L.2.1. in order to be fired during periods of startup, shutdown or malfunction. This emissions unit may also be fired with a mixture of virgin ultra low sulfur fuel (No. 2 fuel oil) with black liquor such that up to one (1) gallon per minute with a maximum sulfur content of 15 parts per million (0.0015 percent) of the virgin ultra low sulfur No. 2 fuel oil is fired in the mixture with black liquor solids. The total virgin ultra low sulfur No. 2 fuel oil usage shall be offset by a reduction of two (2) gallons of BLS at 66% solid solution from the maximum permitted input for each one (1) gallon of No. 2 fuel oil used. The virgin ultra low sulfur diesel fuel shall be pumped into the black liquor lines directly from tanker trucks. Adequate spill protection shall be in place at all times around the tanker trucks and connection system to the black liquor lines . The No. 2 fuel oil may be fired during periods of startup, shutdown and malfunction. An electrostatic precipitator manufactured by Environmental Elements is used to control particulate emissions with a design efficiency of 99%. TRS emissions are monitored with a CEM system. A COMS is also operated as a requirement of 40 CFR 63 Subpart MM. This emissions unit is regulated under Rule 62-296.404, F.A.C., Kraft Pulp Mills, 40 CFR 52.21(d)(2)(ii), 40 CFR 60, Subpart BB- Standards of Performance for Kraft Pulp Mills, and 40 CFR 63, Subpart MM.

No. 4 Smelt Dissolving Tank (Emissions Unit No. 013):

This emissions unit receives molten smelt from the No. 4 Recovery Boiler. The smelt is dissolved in weak wash to yield green liquor for the slaking process. A Venturi scrubber manufactured by Air Pollution, Inc. controls particulate emissions. The control efficiency is estimated at 93%. Scrubber liquid (weak wash- caustic) flow rate is monitored pursuant to Rule 62-296.404, F.A.C. The scrubber liquid recirculation rate and the pressure drop across the scrubber are required to be monitored pursuant to the requirements of 40 CFR 63 Subpart MM. The maximum operating rate of this unit is 137,500 pounds per hour of black liquor solids being fired on the No. 4 Recovery Boiler. This emissions unit is regulated under Rule 62-296.404, F.A.C., Kraft Pulp Mills, CAM for TRS, and 40 CFR 63, Subpart MM.

No. 5 Smelt Dissolving Tank (Emissions Unit No. 014):

This emissions unit receives molten smelt from the No. 5 Recovery Boiler. The smelt is dissolved in weak wash to yield green liquor for the slaking process. The control efficiency is estimated at 93%. A Venturi scrubber manufactured by Air Pollution, Inc., controls particulate emissions. The scrubber liquid (weak wash – caustic) is monitored pursuant to Rule 62-296.404, F.A.C., while the recirculation rate and the pressure drop across the scrubber are monitored pursuant to the standards of 40 CFR 63 Subpart MM. The pressure drop across the scrubber is required to be monitored pursuant to the standards of 40 CFR 60 Subpart BB as well as the scrubbing liquid supply pressure. The maximum operating rate of this unit is 156,780 pounds per hour of black liquor solids being fired on the No. 5 Recovery Boiler. This emissions unit is regulated under Rule 62-296.404, F.A.C., Kraft Pulp Mills, 40 CFR 60, Subpart BB, 40 CFR 52.21(d)(2)(ii), CAM for TRS, and 40 CFR 63, Subpart MM.

No. 7 Power Boiler (Emissions Unit No. 015):

This is a coal fired power boiler, which is fueled by coal, or No. 2 Fuel Oil or No. 6 Fuel Oil during startups, shutdowns, and malfunctions. Rated capacity is 1021 MMBtu/hr heat input. A two-chamber, 6-field each chamber, electrostatic precipitator manufactured by Hamon Research-Cottrell, is used to control particulate emissions. The design efficiency is 98%.

This emissions unit is regulated under Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD) Permit No. PSD-FL-062, Rule 62-296.405, F.A.C., Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated October 11, 1980 and amended in 1984, CAM for particulate matter, and 40 CFR Part 60 Subpart D Fossil Fuel Fired Steam Generators.

The following emissions points are permitted under this emissions unit:

The Coal Handling System (EP 01) is regulated under Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD): Permit No. PSD-FL-062 and 40 CFR 60 Subpart Y – Standards of Performance for Coal Preparation Plants.

The Ash Handling System (EP02) is regulated under Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD): Permit(s) No(s). PSD-FL-062.

Tall Oil Plant (Emissions Unit No. 020):

A Packed-Gas Adsorption Column manufactured by Air Pollution, Inc. controls Total Reduced Sulfur (TRS) emissions from the acidulator, the lignin tank and the saltcake tank at the Tall Oil Plant. The scrubber system uses a solution of caustic soda, at an average pH of 12 pH units, as the absorbing medium. The efficiency of the scrubber is 90%. This emissions unit is regulated under Rule 62-296.404, F.A.C. – Kraft Pulp Mills.

No. 4 Lime Kiln (Emissions Unit No. 021):

This unit is fired primarily with No. 6 fuel oil (maximum of 2.5% sulfur by weight), which may contain on-spec used oil at a firing rate of 170.63 MMBtu per hour heat input. Liquefied Petroleum Gas (LPG) is fired during startups only.

The maximum lime production rate is 26.25 tons per hour. An electrostatic precipitator, manufactured by Research Cottrell, controls particulate matter emissions. The estimated control efficiency is 99%. Sulfur dioxide emissions are also controlled by the sulfur content of the fuel oil (maximum of 2.5% by weight). The kiln also serves as the primary control device for the non-condensable gas (NCG) system. TRS emissions compliance is maintained by proper combustion and is monitored with a CEM system.

This emissions unit is regulated under Rule 62-296.404, F.A.C., Kraft Pulp Mills, 40 CFR 60, Subpart BB, and 40 CFR 63, Subpart MM.

No. 1 Lime Bin receives lime from the No. 4 Lime Kiln (re-burned lime) via conveyor and bucket elevator. A bag fabric filter is used to control particulate matter from the Lime Bin and the bucket elevator. The baghouse was originally installed in 2002 and consists of 49 bags with a collecting area of 524 sq-ft. The baghouse operates with a 3-6 inches of H_2O pressure differential across the unit. An Air Pressure Pulse Jet system is used for bag cleaning

No. 2 Lime Bin receives purchased lime by railcar or truck. Exhaust gases from the No. 2 Lime Bin are vented to the bucket elevator serving the No. 1 Lime Bin, and then through the No. 1 Lime Bin and bag fabric filter.

~~No. 1 Lime Bin receives lime from the No. 4 Lime Kiln and the slaker systems (re-burned lime). No. 2 Lime Bin receives purchased lime by railcar or truck. Particulate matter emissions are controlled with a baghouse manufactured by Jet-Air. The baghouse was originally installed in 2002 and consists of 49 bags with a collecting area of 524 sq-ft. The baghouse operates with a 2-6 inches of H_2O pressure differential across the unit. An Air Pressure Pulse Jet system is used for bag cleaning.~~

C-Line Brownstock Washing System (Emissions Unit No. 024):

The C-Line BSWS is a two-stage, combination rotary drum vacuum/diffusion washer. It consists of the C-Line 1st and 2nd Stage Filtrate Tanks, 2nd Stage Pressure Diffusion Washer, and C-Line 1st Stage Vacuum Washer. The filtrate from the diffusion washer is used as washwater for the rotary drum vacuum washer. The filtrate from the drum washer is sent to the multiple effect evaporators. The diffusion washer uses condensate and whitewater for washing. Gases from these sources are vented to the C-Line Turpentine extraction tower then to the C-Line packed gas adsorption wet scrubber to control TRS (Total Reduced Sulfur) emissions. The gas adsorption column is manufactured by Tristate Contractors and utilizes a sodium hypochlorite solution as the scrubbing media. Control efficiency is estimated to be 90%. This emissions unit is a part of the total Brownstock Washing System (Batch A-Line and B-Line; and Kamyr Line) at the facility.

The C-Line washer processes less than 10% of the batch pulp and less than 3% of the total pulp produced at the mill on an annual basis. This emissions unit is regulated under 40 CFR 60,

Subpart BB, Standards of Performance for Kraft Pulp Mills, and Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD): Permit No. PSD-FL-165.

The scrubber is manufactured by Tristate Contractors, and uses a sodium hypochlorite solution as the scrubbing medium. The average pH of the solution is 10 s.u. The inlet gas flow rate is

approximately 7,200 acfm, inlet gas temperature of 100°F, inlet loading of 50 ppmvd of TRS, and a 0.03 inches H2O pressure differential across the scrubber.

Pulping System – MACT I (Emissions Unit No. 033):

Noncondensible gases (NCG) from the batch digester system, continuous digester system (Kamyr), Nos. 5 and 6 Evaporator systems are collected and combusted in the No. 4 Lime Kiln. Low volume, high concentration (LVHC) non-condensable gas from the turpentine decanter, weir box, and turpentine storage tank, Kamyr blow tank, and the foul condensate collection tank are also collected and combusted in the No. 4 Lime Kiln. The No. 5 Power Boiler is the backup device for compliance with 40 CFR 63 Subpart S.

Pulping process condensates from the batch digester system, the continuous digester system (Kamyr), Nos. 5 and 6 Evaporator systems, the turpentine recovery system, and the LVHC collection system, are collected in a closed condensate collection system and hard piped directly to the UNOX reactor to prevent the release of HAPs to the atmosphere followed by secondary treatment. Biological organisms in the activated sludge in the reactor consume the HAPs in the condensate.

High Volume, Low Concentration (HVLC) NCGs from Kamyr Line BSWs (two identical vacuum drum BSWs), Batch A & B Line BSW (two identical 4-stage drum BSWs), and C-Line BSW (2-stage combination drum/diffusion BSW), are also included in this emissions unit.

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.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit issued October 12, 2012

Application for a Title V Air Operation Permit Revision received December 12, 2012

Notice of Intent to Issue Air Permit issued January 4, 2013

Public Notice Published

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 source of air pollution in accordance with Rule 62-212.400, F.A.C. The facility is one of the 28 categories listed in Rule 62-210.200 (195), F.A.C. - secondary metal production plants, and has the potential to emit more than 100 tons per year of PSD pollutant (VOC).

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

NESHAP: The facility does operate 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: Emissions Units 006 (No. 5 Power Boiler), 013 (No. 4 Smelt Dissolving Tank), 014 (No. 5 Smelt Dissolving Tank), and 015 (No. 7 Power Boiler) are each subject to CAM.

GHG: Based on the Greenhouse Gases Emissions Report for year 2010, the facility total CO_2e emissions (excluding biogenic CO_2) were 784,071 thousand metric tons. The facility has the potential to emit greater than 100,000 TPY of CO_2e emissions, and is therefore a major source of Greenhouse Gases based on EPA's 2010 Gas Tailoring Rule.

PROJECT REVIEW

This permit is being issued for the purpose of revising the terms and conditions of Title V Air Operation Permit No.: 0890003-031-AV and incorporating the terms and conditions of air construction permit No. 0890003-036-AC. The air construction permit No. 0890003-036-AC revised the configuration on the No. 1 and No. 2 Lime Bins and eliminated the No. 2 Lime Bin Baghouse and vent stack.

1. Changes made to Section III, Subsection H, Emissions Unit 021

EU No.	Brief Description
-021	No. 4 Lime Kiln with an electrostatic precipitator to control particulate matter. NCG (Non-Condensable Gases) from the Kamyr digester system, batch digester system, No. 5 Multi-Effect Evaporators system and No. 6 Multi-Effect Evaporators system are combusted in this kiln as a control of the TRS (Total Reduced Sulfur) compounds in the NCG. Low volume, high concentration (LVHC) Noncondensible gases (NCG) from the batch digester system, continuous digester system, turpentine recovery system, evaporator systems, and foul condensate collection tank are collected and burned in the No. 4 Lime Kiln with the No. 5 Power Boiler as the back-up for compliance with 40 CFR 63, Subpart S. No. 1 Lime Bin receives lime from the No. 4 Lime Kiln (re-burned lime) via conveyor and bucket elevator ~~and the slaker systems (re-burned lime).~~ A bag fabric filter is used to control particulate matter from the Lime Bin and the bucket elevator. No. 2 Lime Bin receives purchased lime by railcar or truck. Exhaust gases from the No. 2 Lime Bin are vented to the bucket elevator serving the No. 1 Lime Bin, and then through the No. 1 Lime Bin and ~~A~~ bag fabric filter. ~~filter is used to control particulate matter during railcar and truck unloading~~

Removed Conditions associated with the No. 2 Lime Bin Vent

~~**No. 2 Lime Bin Vent**~~

~~**H.10.** Visible Emissions. Visible Emissions shall not exceed 5% opacity.~~

~~[Rule 62-297.620(4), F.A.C.; Construction Permit No. AC45-141878]~~

~~**H.11.** Particulate Matter Emissions. Particulate Matter emissions shall not exceed 0.03 gr/dscf, 1.2 lbs/hr, and 5.3 TPY.~~

~~[Construction Permit No. AC45-141878]~~

~~**No. 2 Lime Bin Vent**~~

~~**H.34.** Visible Emissions The test method for Visible Emissions shall be EPA Method 9, as incorporated in Chapter 62-297, F.A.C. A compliance test shall be conducted annually, once each federal fiscal year.~~

~~[Construction Permit No. AC45-141878]~~

~~**H.35.** Particulate Matter. Compliance shall be demonstrated by compliance with visible emissions standards specified in Condition H.9. Failure to comply with this standard shall necessitate the requirement to conduct a mass emissions compliance test for particulate matter emissions using EPA Methods 1, 2, 3, and 5 pursuant to Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A.~~

~~[Construction Permit No. AC45-141878]~~

2. Changes made to Section II, Facility-Wide Condition No. FW6.

Pulping Area General

Chips are transported to the digester building on covered conveyors. Chips are transported to the Kamyr Digester in a blow line providing complete enclosure. Chips and fines that escape the transfer system are removed and then swept and carried to a chute where it is ~~dumped~~ transferred to the ground or directly into a dumpster outside the digester building. The pile that is created is reclaimed into the bark system.

Chemical Recovery Area

Purchased lime is unloaded in a closed system and transferred to storage. Reburned lime from the lime kiln is transferred in an enclosed elevator system to storage. Reburned lime is stored in the No. 1 Lime Bin and purchased lime is stored in the No. 2 Lime Bin. PM emissions from the Nos. 1 and 2 Lime Bins are controlled by the baghouse in the No. 1 Lime Bin. ~~a lime bin with a baghouse control. Purchased lime is stored in a lime bin with a baghouse control.~~ Lime piles are minimized by reclaiming as quickly as possible and hauling off-site if necessary. Water is applied when necessary to minimize fugitive dust emissions.

Facility

~~The p~~Particulate matter emissions from roadways and any storage piles are minimized by water application, as necessary. Paved parking areas are maintained on-site for employee parking. Internal mill roadways are generally paved and speed limits are maintained. Vegetation and trees are maintained on the north and east perimeters of the facility to minimize as practicable windblown particulate emissions from these areas.

[Rule 62-296.320(4)(c)2., F.A.C.; Rule 62-213.440, F.A.C.]

CONCLUSION

This project revises Title V air operation permit No. 0890003-031-AV, which was issued on October 12, 2012. 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.