TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

RockTenn CP, LLC
North 8th Street
Fernandina Beach, Florida 32034
Fernandina Beach Mill
Facility ID No. 0890003

PROJECT

Project No. 0890003-047-AC
Application for Air Construction Permit
No. 4 Smelt Dissolving Tank

COUNTY

Nassau, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Management
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

September 2, 2014

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

RockTenn CP, LLC, is an existing Pulp and Paper Plant, which is categorized under Standard Industrial Classification Code Nos. 2631 and 2653. The facility is located in Nassau County at North 8th Street in Fernandina Beach, Florida. The UTM coordinates of the existing facility are Zone 17, 456.20 km East, and 3394.2 km North.

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

Air Construction Permit for the in-kind replacement of EU013, a smelt dissolving tank (SDT), with an identical unit.

Processing Schedule

August 8, 2014: Received the application for an air pollution construction permit.

August 22, 2014: Issued draft permit

August 29, 2014: Received comments from the facility

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

This project is for the replacement of the No. 4 Smelt Dissolving Tank (EU013) with an identical unit. This includes the tank, agitator and shatter jet system. As the unit being installed is identical to the unit being removed and no other equipment or process changes are being made, total projected emissions will not change; therefore, the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Discussion of Emissions

The No. 4 Smelt Dissolving Tank (SDT) is regulated under the federal National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP), 40 CFR 63, Subpart MM, National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills. Subpart MM regulates hazardous air pollutant (HAP) metals by setting limits for PM emissions. For new affected sources only, Subpart MM also regulates gaseous organic HAP by setting limits for methanol emissions.

Subpart MM applies to the owner or operator of each kraft, soda, sulfite, or stand-alone semichemical pulp mill that is a major source of HAP emissions. The affected sources covered under Subpart MM are defined in §63.860(b) as follows:

(1) Each existing chemical recovery system (as defined in §63.861) located at a kraft or soda pulp mill. (*Chemical recovery system* means all existing DCE and NDCE recovery furnaces, smelt dissolving tanks, and lime kilns at a kraft or soda pulp mill. Each existing recovery furnace, smelt dissolving tank, or lime kiln is considered a process unit within a chemical recovery system. [§63.861])
(2) Each new nondirect contact evaporator (NDCE) recovery furnace and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.
(3) Each new direct contact evaporator (DCE) recovery furnace system (as defined in §63.861) and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.
(4) Each new lime kiln located at a kraft or soda pulp mill.
(5) Each new or existing sulfite combustion unit located at a sulfite pulp mill, except such existing units at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. AP-10).
(6) Each new or existing semichemical combustion unit located at a stand-alone semichemical pulp mill.
(7) The requirements of the alternative standard in §63.862(d) apply to the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14).

The No. 4 SDT is currently regulated as part of the existing chemical recovery system at the Fernandina Beach mill. With this project, RockTenn will be replacing the No. 4 SDT with an entirely new process unit. However, a new SDT by itself is not an affected source under Subpart MM—an SDT is part of a new affected source only if it is associated with a new recovery furnace. Since the No. 4 Recovery Furnace is not being replaced, replacement of the SDT in and of itself does not create a new affected source (i.e., the No. 4 Recovery Furnace and its associated SDT) under Subpart MM.

Under the NESHAPs in 40 CFR Part 63, an existing affected source can also become subject to new source NESHAP provisions if it is “reconstructed.” “Reconstruction” under NESHAP means the replacement of components of an existing source to such an extent that the fixed capital cost of the new components exceeds 50 percent of the cost of constructing a comparable entirely new source. As noted above, the relevant “affected source” is the combined recovery furnace and associated smelt dissolving tank. Since the cost of replacing the smelt dissolving tank (less than $1 million) is well under 50 percent of the cost of constructing an entire new

recovery furnace and dissolving tank (easily $50 million or more), the No. 4 SDT replacement is not considered a "reconstruction" under Subpart MM.

Therefore, although the No. 4 SDT will be a "new" "process unit" based on construction date, it will not meet the definition of a "new" "affected source" and as such, will remain part of the existing affected source at the Fernandina Beach Mill.

This emissions unit will become subject to NSPS Subpart BBa as a result of the proposed modification. The TRS and PM emissions standards established in NSPS Subpart BBa are the same as those established in NESHAP Subpart MM, to which this unit is already subject. Therefore, there are no changes in the emissions standards as a result of the proposed modification. However, since NSPS Subpart BBa reestablishes the TRS standard and was enacted after November 11, 1990, Compliance Assurance Monitoring (CAM) no longer applies to this unit pursuant to 40 CFR 64.2(b)(1)(i).

State Requirements

Rule 62-210.200, F.A.C., Definitions - potential to emit (PTE), Rule 62-296.404 – Kraft Pulp Mills

Federal NSPS Provisions

Subpart BBa - Standards of Performance for Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction, or Modification Commenced After May 23, 2013

Subpart A – General Provisions

Federal NESHAP Provisions

Subpart MM - National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill

Subpart A – General Provisions.

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. Brent Steele 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 Northeast District Office, Florida Department of Environmental Protection (Department), 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256 or by e-mail at brent.c.steele@dep.state.fl.us.