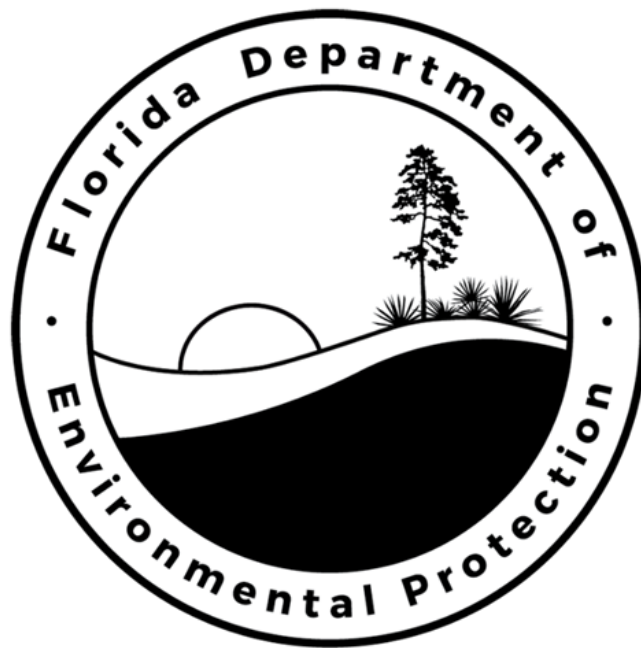


**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
PROPOSED REVISION TO STATE IMPLEMENTATION PLAN  
Pre-Hearing**



**SUBMITTAL NUMBER 2018-03**

**REDESIGNATION REQUEST AND MAINTENANCE PLAN  
FOR THE NASSAU COUNTY  
SULFUR DIOXIDE (SO<sub>2</sub>) NONATTAINMENT AREA**

**April 26, 2018**

- Page intentionally left blank. -

# Table of Contents

<b>Table of Contents</b> .....	<b>3</b>
<b>Executive Summary</b> .....	<b>4</b>
1. Introduction .....	4
2. Background.....	4
3. Clean Data Determination .....	5
4. SIP Development Process.....	5
<b>Redesignation Request</b> .....	<b>6</b>
1. Attainment of the SO <sub>2</sub> NAAQS [CAA section 107(d)(3)(E)(i)] .....	6
1.1. Ambient Air Quality Data .....	6
1.2. Air Quality Modeling .....	8
2. Fully Approved Implementation Plan for the Area [CAA section 107(d)(3)(E)(ii)] .....	11
3. Permanent and Enforceable Air Quality Improvement [CAA section 107(d)(3)(E)(iii)].....	12
3.1. Permanent and Enforceable Emissions Reductions at Rayonier and WestRock.....	13
3.2. Estimated Emission Reductions .....	15
4. Fully Approved Maintenance Plan for the Area [CAA section 107(d)(3)(E)(iv)] .....	16
5. Section 110 and Part D Requirements [CAA section 107(d)(3)(E)(v)].....	16
<b>Area Maintenance Plan</b> .....	<b>17</b>
1. Attainment Emissions Inventory .....	17
2. Maintenance Demonstration.....	18
3. Monitoring Network.....	19
4. Verification of Continued Attainment.....	19
5. Contingency Plan.....	20
<b>Response to 40 CFR Part 51, Appendix V, Criteria</b> .....	<b>22</b>
1. Administrative Materials .....	22
2. Technical Support.....	23
3. Exceptions .....	24
<b>Legal Authority</b> .....	<b>25</b>
<b>Notice of Opportunity to Submit Comments and Participate in Public Hearing</b> .....	<b>27</b>
<b>Public Participation</b> .....	<b>28</b>
<b>Appendix A – Rayonier Air Construction Permit (0890004-036-AC)</b> .....	<b>29</b>
<b>Appendix B – WestRock Air Construction Permit (0890003-046-AC)</b> .....	<b>41</b>
<b>Appendix C – Nassau County NAA SIP Air Quality Modeling Demonstration</b> .....	<b>51</b>
<b>Appendix D – Attainment and Projected Emissions Inventory Development</b> .....	<b>63</b>

## Executive Summary

### 1. Introduction

The Department of Environmental Protection (Department) is proposing a revision to Florida's State Implementation Plan (SIP) under the federal Clean Air Act (CAA). This SIP revision consists of a request to redesignate the portion of Nassau County that was designated as "nonattainment" with respect to the 2010 revised sulfur dioxide (SO<sub>2</sub>) national ambient air quality standard (NAAQS) to "attainment" and a request to approve an associated maintenance plan that will ensure the continued attainment of the 2010 SO<sub>2</sub> NAAQS in the area.

### 2. Background

On June 22, 2010 (effective August 23, 2010), the U.S. Environmental Protection Agency (EPA) promulgated a revised NAAQS for the air pollutant SO<sub>2</sub>. 75 Fed. Reg. 35,520. The level of the revised standard is 75 parts per billion (ppb), based on a three-year average of the annual 99<sup>th</sup> percentile of one-hour daily maximum concentrations. The revised SO<sub>2</sub> standard is the first one-hour primary standard promulgated by EPA for this air pollutant.

On August 5, 2013 (effective October 4, 2013), EPA designated an area in Nassau County, Florida "nonattainment" for SO<sub>2</sub> based on ambient SO<sub>2</sub> monitoring data in the area showing violation of the revised standard over the three-year period 2009-2011. 78 Fed. Reg. 47,191. The designated nonattainment area (NAA) is described as follows:

*That portion of Nassau County encompassing the circular boundary with the center being UTM Easting 455530 meters, UTM Northing 3391737 meters, UTM zone 17, using the NAD83 datum (the location of the violating ambient monitor) and the radius being 2.4 kilometers.*

78 Fed. Reg. 47,198. The only point source of SO<sub>2</sub> emissions within the Nassau County NAA is a pulp and paper mill – Rayonier Performance Fibers, LLC Fernandina Beach Sulfite Pulp Mill (Rayonier). An additional pulp and paper mill – WestRock CP, LLC<sup>1</sup> Fernandina Beach Mill (WestRock) – is immediately adjacent to the NAA.

In 2012, Rayonier received an air construction permit from the Department to construct a new, taller stack for the Vent Gas Scrubbing System, extend the stack at the Power Boiler if needed, and lower the allowable SO<sub>2</sub> emission limits for several units (**Appendix A**).<sup>2</sup> In 2015, WestRock received an air construction permit from the Department to implement a variety of controls, including improvements to the recovery boilers and installation and operation of a piping system to transport non-condensable gases for combustion in the No. 7 Power Boiler (**Appendix B**).<sup>3</sup> These two permits formed the basis of the Department's attainment demonstration for the Nonattainment Area State Implementation Plan (NAA SIP) submitted to EPA on April 3, 2015. The NAA SIP was fully approved by EPA on July 3, 2017 (effective August 2, 2017). 82 Fed. Reg. 30,749. The NAA SIP was fully implemented with the completion of all construction, controls and limits by December 1, 2017.

---

<sup>1</sup> WestRock CP, LLC was formerly known as RockTenn CP, LLC. The legal name was changed September 1, 2015.

<sup>2</sup> See Air Construction Permit 0890004-036-AC issued by the Florida Department of Environmental Protection on April 12, 2012.

<sup>3</sup> See Air Construction Permit 0890003-046-AC issued by the Florida Department of Environmental Protection on January 9, 2015.



### 3. Clean Data Determination

Attainment of the SO<sub>2</sub> NAAQS occurs when the most recent three-year average of the annual 99<sup>th</sup> percentile of one-hour daily maximum concentrations at a monitor does not exceed the level of the NAAQS. The last three-year average of the annual 99<sup>th</sup> percentile of one-hour daily maximum concentrations exceeding the NAAQS in the NAA was recorded for the period 2010-2012, as shown in **Table 1** below. Therefore, beginning with the period 2011-2013, the SO<sub>2</sub> monitor in the NAA is attaining the 2010 revised SO<sub>2</sub> NAAQS.

**Table 1. Fourth high SO<sub>2</sub> values and design values for monitor 12-089-0005 for 2007 – 2017.**

<b>Year</b>	<b>Fourth High Value (ppb)</b>	<b>Design Value (ppb)</b>
2007	82	
2008	98	
2009	73	84
2010	216	129
2011	97	129
2012	54	122
2013	60	70
2014	56	57
2015	57	58
2016	35	51
2017	32	43

### 4. SIP Development Process

Section 403.061(35), Florida Statutes, authorizes the Department to “exercise the duties, powers, and responsibilities required of the state under the federal Clean Air Act.” These duties and responsibilities include the development and periodic updating of Florida’s SIP. Pursuant to this statutory authority, the Department has developed this proposed SIP revision.

Pursuant to state administrative procedures and 40 CFR 51.102, on April 26, 2018, the Department published a notice in the Florida Administrative Register (FAR) announcing the opportunity for the public to provide comments, request a public hearing, and participate in a public hearing to be held on June 1, 2018, if requested, regarding the proposed revision to Florida’s SIP.

In accordance with the 30-day notice requirement of 40 CFR 51.102, this pre-hearing submittal regarding the proposed SIP revision was transmitted to EPA on April 26, 2018, and posted on the website for the Department’s Division of Air Resource Management. At the same time, notice of the opportunity to submit comments, request a public hearing, and participate in the public hearing, if requested, was transmitted to the Department’s District offices and Florida’s local air pollution control programs.

## Redesignation Request

The Department is requesting that EPA redesignate the Nassau County SO<sub>2</sub> NAA to “attainment.” EPA’s memos *Procedures for Processing Requests to Redesignate Areas to Attainment*<sup>4</sup> and *Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*<sup>5</sup> discuss the five requirements for redesignation found in CAA Sections 107(d)(3)(E)(i-v):

- i. the Administrator determines that the area has attained the national ambient air quality standard;
- ii. the Administrator has fully approved the applicable implementation plan for the area under section 7410(k) of this title;
- iii. the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent and enforceable reductions;
- iv. the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 7505a of this title; and
- v. the State containing such area has met all requirements applicable to the area under section 7410 of this title and part D of this subchapter.

This submittal demonstrates that each of these requirements has been met and that a redesignation of the area to “attainment” is appropriate as detailed in this redesignation request.

### 1. Attainment of the SO<sub>2</sub> NAAQS [CAA section 107(d)(3)(E)(i)]

*The State must show that the area is attaining the NAAQS. There are two components involved in making this demonstration which should be considered interdependently: ambient air quality data and EPA-approved air quality modeling.*

#### 1.1. Ambient Air Quality Data

The Department currently operates one ambient SO<sub>2</sub> monitor in the NAA around Rayonier (**Figure 1**). The Fernandina Beach SO<sub>2</sub> monitor (12-089-0005) is located approximately 0.9 km southeast of Rayonier and 2.5 km south of WestRock. The original nonattainment designation was based on monitored violations at this monitor.

A summary of the most recent monitoring data from this monitor along with the date when the monitor attained the 2010 SO<sub>2</sub> NAAQS is presented in **Table 2**. As can be seen, there has been significant improvement in air quality with respect to SO<sub>2</sub> in the NAA as construction and control measures were implemented. The daily maximum 1-hour SO<sub>2</sub> design values recorded at the monitor since 2011 are shown below in **Figure 2**. The graph shows that the fourth high concentrations were exceeding the NAAQS in 2011, with overall concentrations decreasing since that time through 2017. Since 2011, the annual fourth high value has remained below the standard, and there have been no 1-hour values

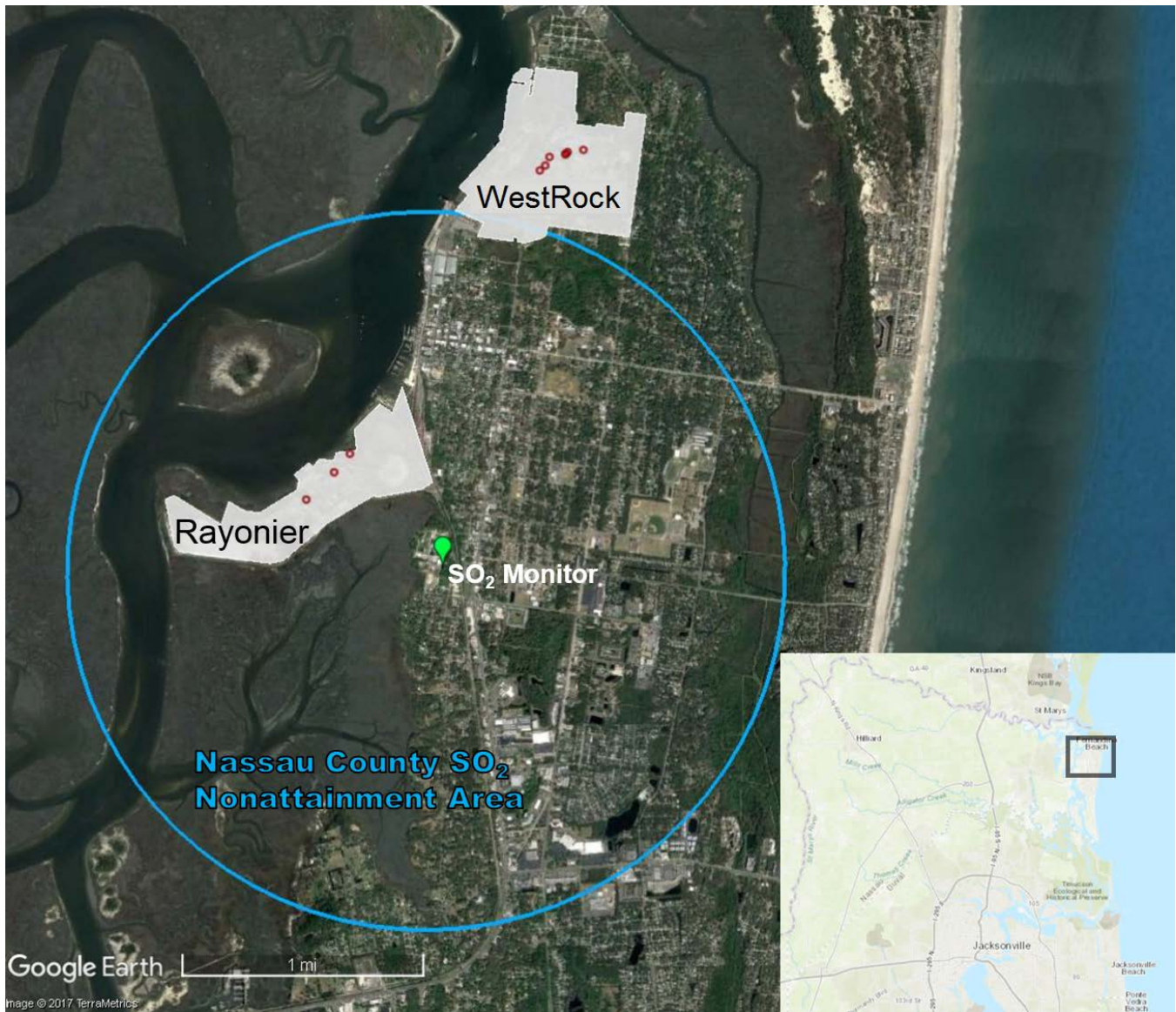
---

<sup>4</sup> Procedures for Processing Requests to Redesignate Areas to Attainment. John Calcagni Memorandum dated September 4, 1992, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: [www.epa.gov/ozone-pollution/procedures-processing-requests-redesignate-areas-attainment](http://www.epa.gov/ozone-pollution/procedures-processing-requests-redesignate-areas-attainment)

<sup>5</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions. Stephen D. Page Memorandum dated April 23, 2014, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: <https://www.epa.gov/so2-pollution/guidance-1-hour-sulfur-dioxide-so2-nonattainment-area-state-implementation-plans-sip>

recorded above the standard since late 2014 through 2017. The monitoring data presented here indicate that as of January 2014, the 2010 SO<sub>2</sub> NAAQS has been attained throughout the Nassau County NAA.

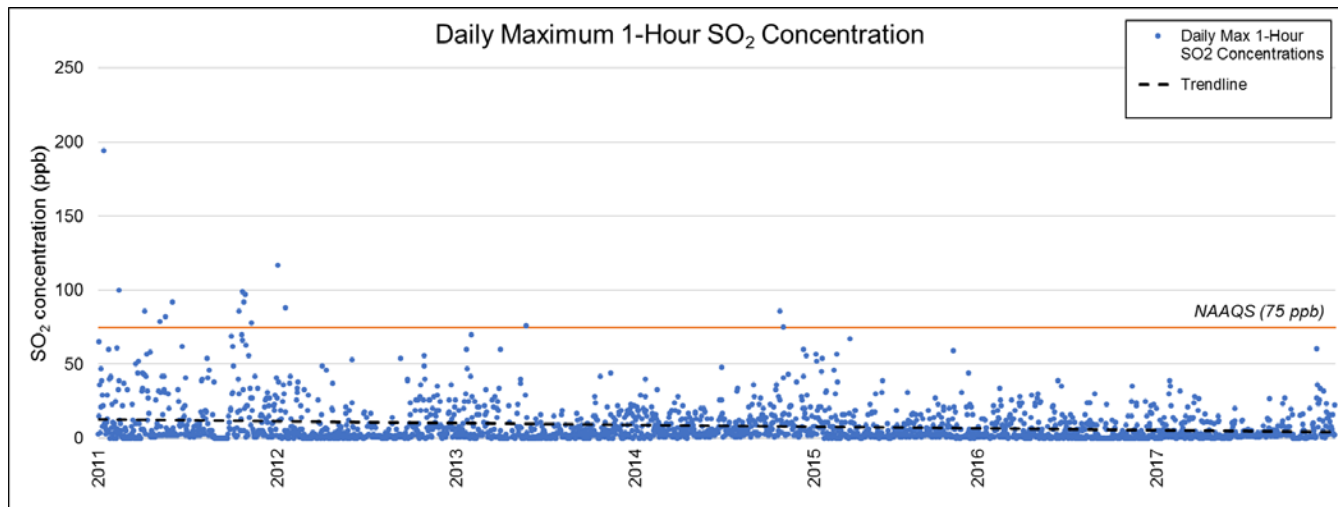
**Figure 1:** Ambient SO<sub>2</sub> monitor in the Nassau County SO<sub>2</sub> nonattainment area.



**Table 2:** Monitored SO<sub>2</sub> design values and reductions in the Nassau County SO<sub>2</sub> nonattainment area.

Monitor	Attainment Date	Highest Design Value 2011-2017	2015-2017 Design Value	Percent Reduction in Design Value
Fernandina Beach	January 2014	129 ppb	43 ppb	67%

**Figure 2:** Monitored SO<sub>2</sub> concentrations in the Nassau County SO<sub>2</sub> nonattainment area 2011-2017.



All data from this monitor, including data for the most recent three-year period, have been quality assured in accordance with 40 CFR Part 58, Subpart B and all other federal requirements. The data have been fully certified and uploaded to the EPA air quality system (AQS) for public access. A data completeness report is provided below in **Table 3**. Because data were incomplete in 2011 Quarter 3 and 2016 Quarter 3 and Quarter 4, the data substitution test in 40 CFR Part 50, Appendix T, section 3(c)(ii)(B) was applied to the data to validate the 2011-2013, 2014-2016 and 2015-2017 attaining design values. The results of the data substitution tests resulted in test design value of 70 ppb for 2011-2013, 66 ppb for 2014-2016, and 50 ppb for 2015-2017. The tests determined that the design values for each of these three-year periods are valid.

Once redesignated, the Department commits to continue operating an appropriate SO<sub>2</sub> monitoring network to verify the continued attainment of the 2010 SO<sub>2</sub> NAAQS in the area. Additionally, the Department will consult with EPA Region 4 prior to making changes to the existing monitoring network, continue to quality assure the monitoring data in accordance with 40 CFR Part 58, Subpart B and all other federal requirements, and enter all data into AQS in a timely manner.

**Table 3:** Data completeness for SO<sub>2</sub> monitor in the Nassau County SO<sub>2</sub> nonattainment area. Data substitution was used to complete 2011 Quarter 3, 2016 Quarter 3, and 2016 Quarter 4 and validate the design values.

Monitor	Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual
Fernandina Beach	2011	95.57	99.31	69.75	98.05	90.87
	2012	99.13	97.89	98.73	98.19	98.49
	2013	97.96	98.21	99.00	99.23	98.61
	2014	95.42	99.18	98.87	98.60	98.03
	2015	95.83	93.13	99.37	97.74	96.53
	2016	98.95	96.75	74.09	73.87	85.85
	2017	96.67	99.08	83.51	95.56	93.68

## 1.2. Air Quality Modeling

The NAA SIP for the area included air quality modeling to demonstrate that the implemented control measures would result in the area attaining and maintaining the NAAQS (**Appendix C**). This

demonstration was performed in 2015 with meteorological data from 2008-2012 and using the recommended AMS/EPA Regulatory Modeling (AERMOD) system including the pre-processors AERMET and AERMAP.<sup>6</sup> The modeling demonstration included all SO<sub>2</sub>-emitting sources at the Rayonier and WestRock facilities (including building downwash effects), the only significant sources of SO<sub>2</sub> emissions in or near the NAA. The modeled emission rates, and equivalent compliance limits (calculated following EPA guidance<sup>7</sup>), are listed in **Table 4** below. Other sources were determined to have an insignificant contribution to SO<sub>2</sub> levels in the NAA, and are accounted for in the added background concentrations. The background concentrations were developed for each hour of the day by season from Fernandina Beach monitor (12-089-0005) data for January 2012 through December 2013, following the procedure outlined in EPA's SO<sub>2</sub> NAAQS Designations Modeling Technical Assistance Document.<sup>8</sup> Only the most recent two years of data were used rather than three years, due to a significant, multi-year decline in the monitored SO<sub>2</sub> concentrations at this site. The background concentrations were filtered to remove measurements that were influenced by Rayonier or WestRock (that is, measurements where the hourly wind direction was in the range of 263° to 61°); the final set of background concentrations is summarized in **Table 5** below. A discrete Cartesian grid of 2,329 receptors with 100 m spacing (50 m along property boundaries) encompassing the entire NAA, except facility property, was used for predicting maximum concentrations in the modeling. Further details on the modeling demonstration can be found in **Appendix C**.

**Table 4:** Derivation of compliance emission limits from the Nassau County SO<sub>2</sub> nonattainment area plan.

Derivation of Compliance Emission Limits					
Source	Modeled Emissions Rate (lb/hr)	Averaging Time Adjustment Factor	Based on:	Compliance (Permitted) Limit (lb/hr)	Averaging Time
<b>Rayonier</b>					
Vent Gas Scrubber	39.62	0.639	hourly CEMS	25.3	3-hour
Sulfite Recovery Boiler	303.68	0.978	hourly CEMS	297	3-hour
No. 6 Power Boiler	190.88	0.943	hourly CEMS	180	3-hour
<b>Rock Tenn</b>					
No. 5 Power Boiler	16.2	0.926	hourly CEMS	15	3-hour
No. 7 Power Boiler	1238.85	0.989	hourly fuel use and emis. Factor	1225.25	3-hour
No. 4 Recovery Boiler	150.6	0.999	hourly fuel use and emis. Factor	150	3-hour
No. 5 Recovery Boiler	150.3	0.998	hourly fuel use and emis. Factor	150	3-hour
2-unit cap	300.9	0.997	hourly fuel use and emis. Factor	300	3-hour

<sup>6</sup> *Guideline on Air Quality Models*. 40 CFR Part 51, Appendix W.

<sup>7</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

[https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance\\_nonattainment\\_sip.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf)

<sup>8</sup> SO<sub>2</sub> National Ambient Air Quality Standards Designations Modeling Technical Assistance Document. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. <https://www.epa.gov/sites/production/files/2016-06/documents/so2modelingtad.pdf>

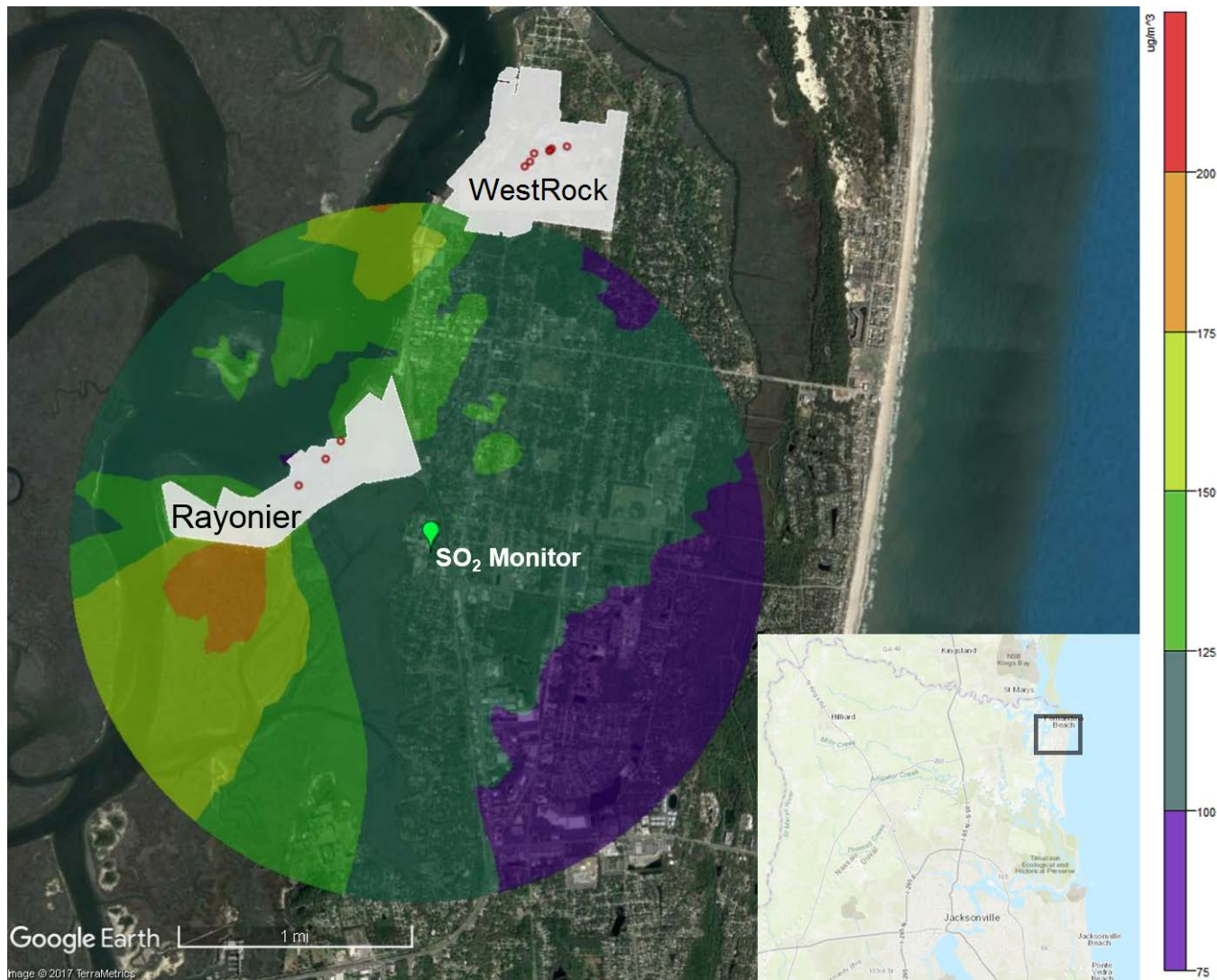


**Table 5:** Final set of SO<sub>2</sub> background concentrations from the Nassau County SO<sub>2</sub> nonattainment area plan.

SO <sub>2</sub> Background Concentrations by Hour-of-Day by Season for Monitor 089-0005 (ppb)									
Hour	Winter	Spring	Summer	Fall	Hour	Winter	Spring	Summer	Fall
0:00	2.0	1.0	2.0	4.5	12:00	4.0	3.0	3.0	3.0
1:00	2.0	1.0	1.0	3.5	13:00	3.0	3.0	2.0	2.0
2:00	3.0	1.0	1.5	2.5	14:00	2.5	3.5	2.0	2.5
3:00	2.5	1.0	1.5	1.5	15:00	2.5	2.0	2.0	2.5
4:00	2.5	1.0	1.5	2.5	16:00	2.0	1.5	2.5	2.5
5:00	2.0	1.5	2.5	4.5	17:00	1.0	1.0	1.5	3.0
6:00	3.0	1.5	2.0	4.0	18:00	2.0	2.0	3.0	2.5
7:00	2.0	1.5	3.0	4.5	19:00	1.0	1.5	1.5	2.5
8:00	2.0	1.5	3.5	5.0	20:00	1.0	1.5	1.0	1.5
9:00	4.0	2.0	7.5	4.5	21:00	2.0	1.0	1.0	3.0
10:00	4.5	4.0	6.0	4.5	22:00	1.0	1.0	1.0	3.5
11:00	6.0	2.5	6.0	4.5	23:00	1.5	1.5	3.0	2.5

Although the ambient monitor is not placed to sample the highest SO<sub>2</sub> concentrations, the results of the modeling demonstration using maximum allowable emissions indicate that the NAA is complying with the revised SO<sub>2</sub> NAAQS as a result of significant real reductions of SO<sub>2</sub> emissions at both the Rayonier facility and the WestRock facility (**Figure 3**). The modeling results also show that concentrations decrease rapidly with increasing distance from the facility. Based on these results from this recent modeling demonstration, it can be reasonably extrapolated from the current monitoring network that the entire NAA is now attaining the NAAQS and additional modeling is not necessary.

**Figure 3:** SO<sub>2</sub> monitor location and modeled design values from the Nassau County SO<sub>2</sub> NAA plan.



**2. Fully Approved Implementation Plan for the Area [CAA section 107(d)(3)(E)(ii)]**

*The SIP for the area must be fully approved under CAA section 110(k), and must satisfy all requirements that apply to the area.*

Florida’s SIP for the Nassau County SO<sub>2</sub> NAA is fully approved by EPA. The SIP has no parts that are the subject of a disapproval; a finding of failure to submit or to implement the SIP; or partial, conditional, or limited approval.<sup>9</sup>

The Department submitted a complete NAA plan to EPA on April 3, 2015. Section 172(c) of the Clean Air Act lists the requirements that must be met in all NAA plans:

- 172(c)(1): Analysis of RACM/RACT in the NAA
- 172(c)(2), (4), (6), (7): Modeling analysis showing that the enforceable emissions limitations and other control measures taken by the state will provide for reasonable further progress (RFP) and expeditious attainment of the NAAQS
- 172(c)(3): Base year emissions inventory

<sup>9</sup> 40 CFR 52.522

- 172(c)(5): Provide for a nonattainment new source review (NNSR) program and account for any emissions that may affect RFP or interference with attainment or maintenance of the NAAQS
- 172(c)(9): Contingency measures

This SIP revision met each of these requirements for the Nassau County SO<sub>2</sub> NAA, including a 2011 base year emissions inventory, analysis of RACM/RACT for Rayonier, enforceable conditions from air construction permits issued to Rayonier and WestRock, a dispersion modeling demonstration indicating attainment of the NAAQS, the Department's existing SIP-approved NNSR and PSD permitting program (outlined in Chapters 62-204, 62-210, and 62-212, F.A.C.), and contingency measures. On July 3, 2017 (effective August 2, 2017), EPA fully approved the Department's NAA SIP for the Nassau County SO<sub>2</sub> NAA. 82 Fed. Reg. 30,749. As of December 1, 2017, all control measures are in place and the NAA plan is fully implemented.

### **3. Permanent and Enforceable Air Quality Improvement [CAA section 107(d)(3)(E)(iii)]**

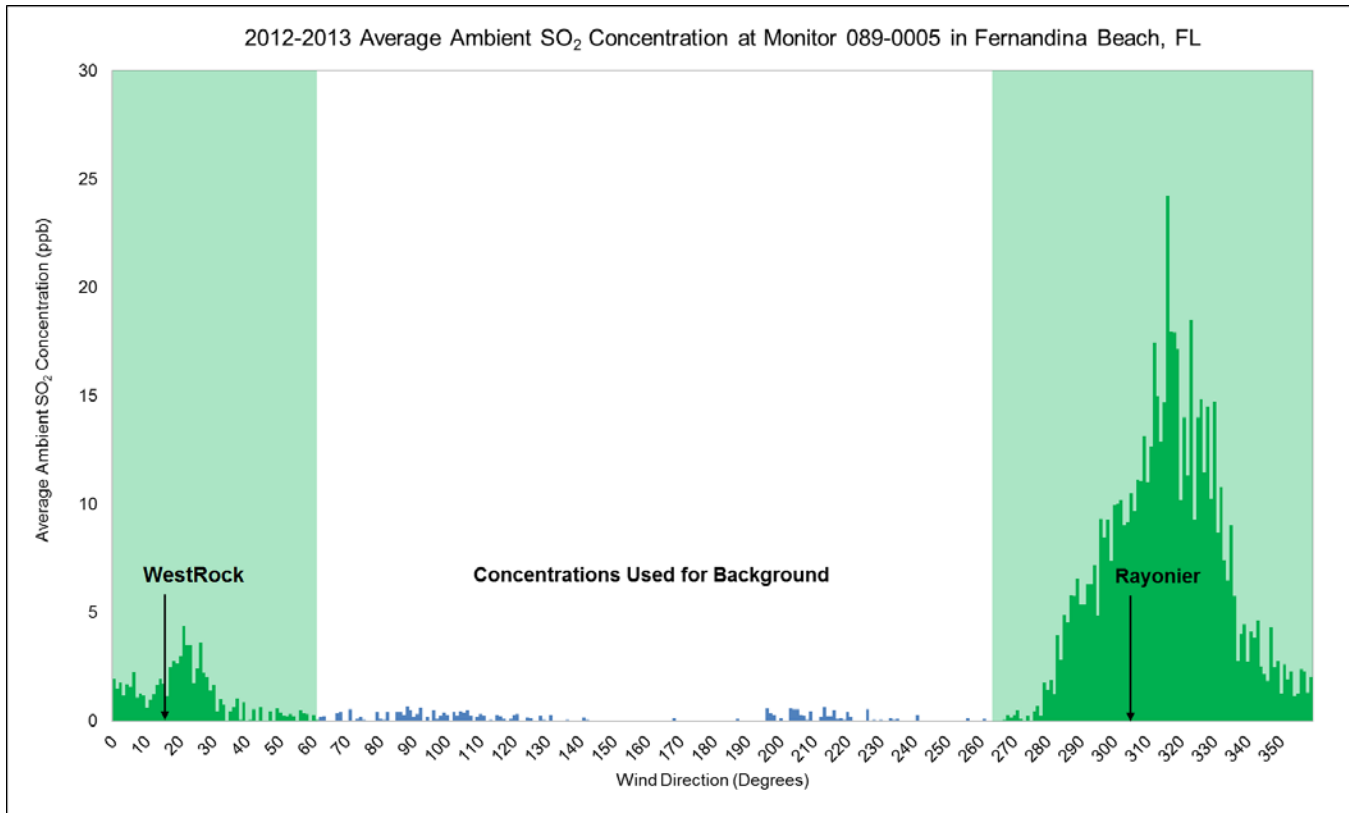
*The State must be able to reasonably attribute the improvement in air quality to emission reductions which are permanent and enforceable.*

SO<sub>2</sub> is a source-oriented pollutant that is not naturally present in the environment in high concentrations and is not formed in large quantities by any atmospheric process. Elevated concentrations are often due to a single large industrial source or group of sources with localized impacts. The Nassau County NAA includes just one major point source of SO<sub>2</sub> (Rayonier) and has one major point source of SO<sub>2</sub> just outside the NAA (WestRock). Further analysis of the ambient monitoring data shows that elevated SO<sub>2</sub> concentrations are almost exclusively associated with wind directions from Rayonier (**Figure 4**). Modeling of actual emissions at the time of area designations revealed contributing impacts throughout the NAA due to emissions from WestRock. It follows then that the elevated ambient SO<sub>2</sub> concentrations in the NAA are due in large part to these two sources.

The NAA SIP for the area was based on this determination and successfully reduced ambient concentrations below the NAAQS by only requiring emissions reductions at Rayonier and WestRock. These emissions reductions are permanent and enforceable through the facilities' Title V operating permits and the federally-approved NAA SIP. The construction work at Rayonier was completed in the second quarter of 2014, and construction work at WestRock was fully completed by December 2017. This corresponds to the decrease in emissions from the facilities beginning in 2012 and continuing into 2017 (**Figure 5**) and the overall downward trend in monitored daily maximum 1-hour ambient SO<sub>2</sub> concentrations seen in **Figure 2**, with no values measured above the standard since late 2014 through 2017. Since the completion of construction and the full implementation of the NAA SIP, there have been no monitored exceedances of the 2010 SO<sub>2</sub> NAAQS. The monitored levels of SO<sub>2</sub> and the completed implementation of control measures at both facilities provide high confidence that the permanent and enforceable permit conditions in place at Rayonier and WestRock will provide for the continued maintenance of the 2010 SO<sub>2</sub> NAAQS.



**Figure 4:** Ambient SO<sub>2</sub> concentrations by wind direction near Rayonier and WestRock.



### 3.1. Permanent and Enforceable Emissions Reductions at Rayonier and WestRock

The Rayonier and WestRock facilities have undergone construction and implementation of various control measures since the nonattainment designation.

The construction at Rayonier included the following pollution control measures:

- Construct a new, taller stack (to at least 165 feet) for the Vent Gas Scrubbing System to improve dispersion;
- Lower the allowable SO<sub>2</sub> emission limit for the Recovery Boiler to 250 ppmvd (297 lb/hr);
- Lower the allowable SO<sub>2</sub> emission limit for the Power Boiler to 340 ng/J heat input (180 lb/hr);
- Lower the allowable SO<sub>2</sub> emission limit for the Vent Gas Scrubber System to 100ppm (25.3 lb/hr)

These control measures are required by the Rayonier air construction permit<sup>10</sup> that was incorporated into both Florida's SIP via the federally-approved NAA plan and the facility's Title V operating permit,<sup>11</sup> making these controls permanent and enforceable. The controls and emission limits included in the permit satisfy RACM/RACT requirements and were approved in the NAA plan.

The Sulfite Recovery Boiler is the largest SO<sub>2</sub> source at the Rayonier facility. The boiler fires spent liquor for the purposes of producing both combustion gases that contain recoverable SO<sub>2</sub> and heat for steam generation. Flue gases exiting the boiler are routed to an existing multi-stage wet scrubber. The

<sup>10</sup> See air construction permit 0890004-036-AC issued by the Florida Department of Environmental Protection on April 12, 2012.

<sup>11</sup> See Title V operating permit 0890004-054-AV issued by the Florida Department of Environmental Protection on September 7, 2017.

scrubber serves dual roles of process equipment to recover SO<sub>2</sub> and air pollution control to reduce emissions of particulate matter and SO<sub>2</sub>. The initial stage of scrubbing reduces emissions of particulate matter through the quench tower and the scrubber heat removal sections. The final stage of scrubbing consists of a two-section absorber that utilizes ammonium hydroxide as a scrubbing medium. Water and aqueous ammonia are added to the upper section for pH control and a constant ammonia flow is added to the lower section. SO<sub>2</sub> is recovered from the cooled flue gases in this final stage by reaction with fresh aqueous ammonia to form an ammonium bisulfite solution. Exit gases from the scrubber are routed to a high velocity mist eliminator, the Brinks Demister, to reduce the fine particulate matter byproduct of the ammonium bisulfite absorption. The scrubber was historically operated to maintain compliance with the less-strict 1971 SO<sub>2</sub> NAAQS, and the Department determined that the scrubber could be operated more efficiently. The control of SO<sub>2</sub> emissions was optimized through careful adjustment and monitoring of the ammonia addition rate into the scrubber. To reflect the improvements in scrubber operation, the maximum allowable SO<sub>2</sub> emission limit was reduced from 300ppm to 250ppm.

The primary fuel fired in the No. 6 Power Boiler is biomass. The boiler is equipped with a wet alkaline scrubber for control of SO<sub>2</sub> emissions. In 2013, the boiler emitted only 6.3 tons of SO<sub>2</sub>, significantly lower than in previous years. This demonstrated that with effective use of the scrubber, restricted operating parameters, and limited use of No. 6 fuel oil, the unit was capable of meeting a reduced SO<sub>2</sub> limit. To reflect this, the enforceable SO<sub>2</sub> emission limit for this unit was reduced from 420 lb/hr to 180 lb/hr.

The Vent Gas Scrubber is in itself SO<sub>2</sub> control equipment. This wet scrubber controls emissions from numerous vents from the cooking acid plant, the red stock washers, the unwashed stock tank, the spent sulfite liquor storage tanks, the spent sulfite liquor washer area, the digesters, and the blow pits. The scrubber consists of a packed tower split into two sections with gases flowing upward through the packing. The lower section is designed to control emissions of SO<sub>2</sub> through gas absorption using alkaline scrubbing media. The upper section of the scrubber is designed as a direct contact condenser that is used to collect methanol. A distributive control system is used to manage operating problems and calculates one-hour and 24-hour running averages of the SO<sub>2</sub> concentration. The stack for this scrubber was previously only 110 feet in height, lower than the good engineering practice (GEP) height. The stack height was increased to 180 feet to allow for more efficient and effective dispersion of the SO<sub>2</sub> emissions over a larger area, and therefore provide for significant reductions in ground-level SO<sub>2</sub> concentrations near the facility. In addition, to reflect more efficient use of the scrubber, the maximum allowable SO<sub>2</sub> emission limit was reduced from 250 ppm to 100 ppm. **Table 6** summarizes each of these source changes at the Rayonier facility.

**Table 6: Rayonier Facility SO<sub>2</sub> Source Changes**

Source	SO <sub>2</sub> Emission Limit*		Stack Height (m)	
	Previous	Current	Previous	Current
Vent Gas Scrubber	250 ppm (63.2 lb/hr)	100 ppm (25.3 lb/hr)	110 ft	180 ft
Recovery Boiler	300 ppm (353.3 lb/hr)	250 ppm (297 lb/hr)	No change	
No. 6 Power Boiler	420 lb/hr	180 lb/hr	No change	
*All previous and new SO <sub>2</sub> emission limits are 3-hr rolling averages.				

The construction at WestRock included the following pollution control measures:

- Improvements to each of the facility’s two recovery boilers to achieve a more stable and consistent combustion and chemical recovery process;
- Installation and operation of a piping system to transport non-condensable gases for combustion in the No. 7 Power Boiler.

These control measures are required by the WestRock air construction permit<sup>12</sup> that was incorporated into both Florida’s SIP via the federally-approved NAA plan and the facility’s Title V operating permit<sup>13</sup>, making these controls permanent and enforceable.

In the No. 4 and 5 Recovery Boilers, WestRock completed physical improvements to achieve a more stable and consistent combustion and chemical recovery process within each unit. These improvements included adding liquor heaters to raise the as-fired solids content, installing a heavy liquor tank to provide uniform operations, combustion air system improvements, combustion control system upgrades, concentrator pump and associated piping changes, and pump and piping upgrades necessary to fire No. 2 fuel oil. Previously, these boilers had no SO<sub>2</sub> emissions limit. The physical improvements implemented allowed the boilers to meet a new 300 lb/hr cap.

A non-condensable gas (NCG) pipeline was constructed to reroute low volume, high concentration NCG from the batch digester system, continuous digester system, turpentine recovery system, evaporator systems, and foul condensate collection tank, to the No. 7 Power Boiler. These NCGs were previously collected and burned in the No. 5 Power Boiler. Upstream of the introduction of NCGs to the No. 7 Power Boiler, a white liquor scrubber system was installed to remove total reduced sulfur (TRS) from the NCG stream before combustion. This rerouting and scrubbing of NCGs allowed for a significant reduction in SO<sub>2</sub> emissions from the No. 5 Power Boiler without any increase in the emission limit of the No. 7 Power Boiler. The SO<sub>2</sub> emission limit for the No. 5 Power Boiler was significantly reduced to reflect this change. **Table 7** summarizes each of these source changes at the WestRock facility.

**Table 7: WestRock Facility SO<sub>2</sub> Source Changes**

Source	SO <sub>2</sub> Emission Limit		Other Changes
	Previous	Current*	
No. 5 Power Boiler	550 lb/hr**	15 lb/hr	Removal of NCGs.
No. 4 Recovery Boiler	None	300 lb/hr cap	Improvements made to combustion air system.
No. 5 Recovery Boiler	None		Improvements made to combustion air system.
No. 7 Power Boiler	No Change		Addition of NCG pipeline for backup combustion (white liquor scrubber added upstream).
*All new SO <sub>2</sub> emission limits are 3-hour rolling averages.			
**24-hour average			

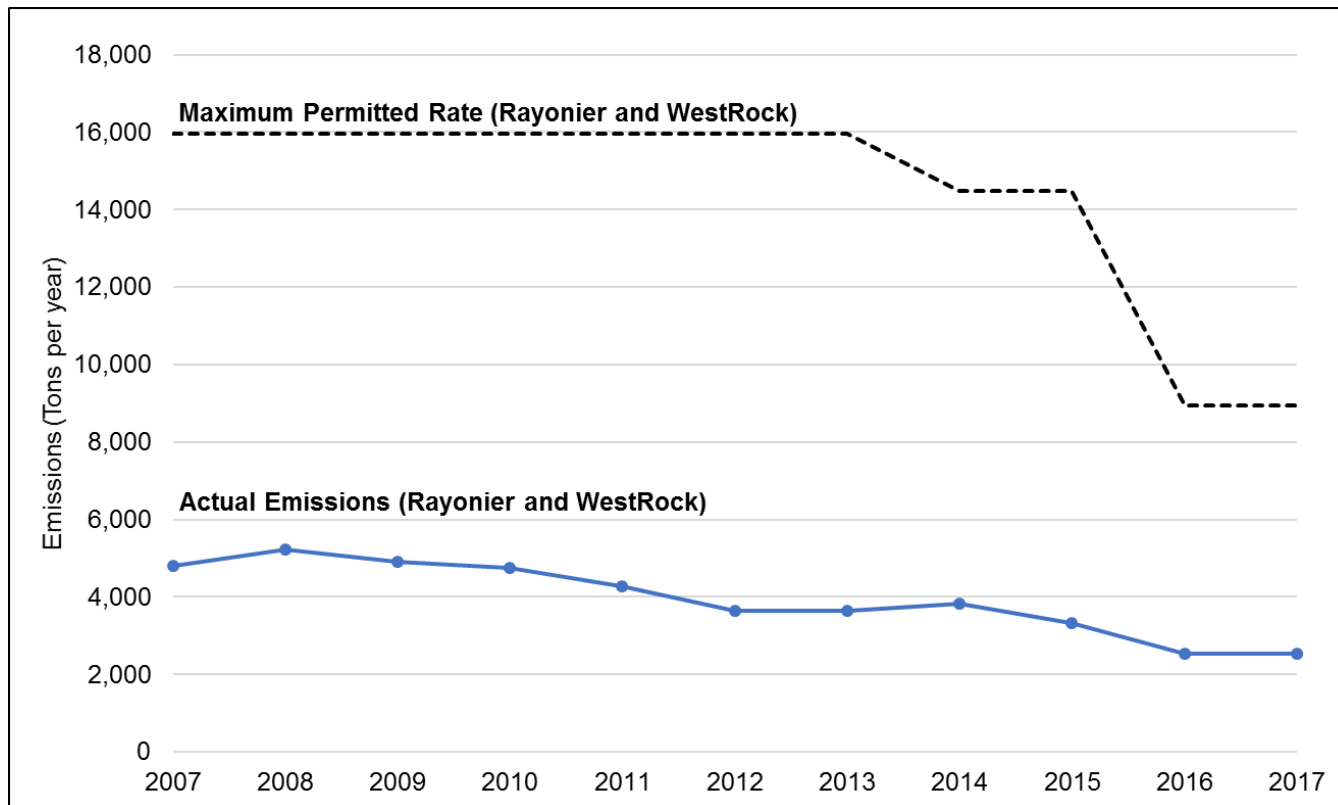
### 3.2. Estimated Emission Reductions

The NAA plan estimated base year 2011 emissions of SO<sub>2</sub> from Rayonier of 561.97 tons and from WestRock of 3,716.67 tons. Rayonier’s previous allowable limit was 3,663.87 tons per year. WestRock’s previous allowable limit was 12,286.69 tons per year. The new maximum allowable emissions are 2,200.07 and 6,746.08 tons per year for Rayonier and WestRock, respectively, approximately a 44 percent reduction. **Figure 5** shows that actual SO<sub>2</sub> emissions from Rayonier and WestRock have decreased 1,290 tons (approximately 34 percent) since 2014.

<sup>12</sup> See air construction permit 0890003-046-AC issued by the Florida Department of Environmental Protection on January 9, 2015.

<sup>13</sup> See Title V operating permit 0890003-055-AV issued by the Florida Department of Environmental Protection on November 14, 2017.

**Figure 5:** Annual SO<sub>2</sub> emissions from the Rayonier and WestRock facilities 2007-2017.



#### **4. Fully Approved Maintenance Plan for the Area [CAA section 107(d)(3)(E)(iv)]**

*EPA must fully approve a maintenance plan which meets the requirements of CAA section 175A.*

The maintenance plan for this area is contained in the “Area Maintenance Plan” section of this document and is subject to parallel processing with this redesignation request.

#### **5. Section 110 and Part D Requirements [CAA section 107(d)(3)(E)(v)]**

*For the purposes of redesignation, a State must meet all requirements of CAA section 110 and Part D that were applicable prior to submittal of the complete redesignation request.*

Section 110(a) of the CAA contains the general requirements for a SIP for national primary and secondary ambient air quality standards. Within three years of the promulgation of a new NAAQS, the State is required to submit an “infrastructure SIP” (ISIP) providing a plan for the implementation, maintenance, and enforcement of the new NAAQS. Florida’s ISIP for the 2010 SO<sub>2</sub> NAAQS was submitted to EPA on June 3, 2013 (supplemented January 8, 2014). This submittal certified that the Florida SIP contains provisions that ensure the 2010 SO<sub>2</sub> NAAQS is implemented, enforced, and maintained in Florida. EPA approved Florida’s ISIP on September 30, 2016, 81 Fed. Reg. 67,179 (effective October 31, 2016), except for the CAA section 110(a)(2)(D)(i)(I) element, which the Department will be submitting as a revision to Florida’s June 3, 2013 ISIP submission in the near future.

Subpart 1 of Part D of the CAA contains the general requirements applicable to all areas designated as nonattainment for any NAAQS. Subpart 5 contains requirements specific to areas designated nonattainment for a SO<sub>2</sub> NAAQS. Florida has satisfied these requirements through EPA’s approval of the NAA plan and the subsequent full implementation of that plan.

## Area Maintenance Plan

Section 107(d)(3)(E) of the CAA stipulates that for an area to be redesignated to “attainment” from “nonattainment,” the EPA must fully approve a maintenance plan which meets the requirements of section 175A. Section 175A outlines the framework of a maintenance plan that must provide for maintenance of the relevant NAAQS in the area for at least 10 years after redesignation. The Department is submitting this maintenance plan for the Nassau County SO<sub>2</sub> NAA concurrently with the redesignation request also contained within this SIP revision. This plan provides for maintenance of the 2010 SO<sub>2</sub> NAAQS through the year 2032.

EPA’s memos *Procedures for Processing Requests to Redesignate Areas to Attainment*<sup>14</sup> and *Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*<sup>15</sup> recommend considering the following five provisions in the maintenance plan when seeking redesignation:

1. Attainment Emissions Inventory,
2. Maintenance Demonstration,
3. Monitoring Network,
4. Verification of Continued Attainment,
5. Contingency Plan.

Each of these provisions are addressed here in accordance with the same EPA memos and the CAA.

### 1. Attainment Emissions Inventory

*The State should develop an attainment emissions inventory to identify the level of emissions in the area which is sufficient to attain the NAAQS. Where the State has made an adequate demonstration that air quality has improved as a result of the SIP, the attainment inventory will generally be the actual inventory at the time the area attained the standard.*

As explained in **section 3** of the **Redesignation Request** above, the improvement in air quality in the NAA is due directly to the construction and emissions reductions at the Rayonier and WestRock facilities. Through the control measures implemented at both facilities, including, among other things, a stack height increase and lower allowable SO<sub>2</sub> emission limits for units at Rayonier, and improvements to recovery boilers and a piping system for non-condensable gas combustion at WestRock, SO<sub>2</sub> emissions have been dramatically reduced. The attainment emissions inventory is therefore simply the emissions inventory from the year after monitored ambient SO<sub>2</sub> concentrations fell below the NAAQS.

There has not been a monitored violation of the SO<sub>2</sub> NAAQS since 2012 in Nassau County. The Department has therefore chosen to use 2013 actual emissions data to represent the attainment emissions inventory. SO<sub>2</sub> emissions data from Rayonier and WestRock facilities’ 2013 annual operating reports (AOR) for all sources are presented below in **Table 8**. WestRock is included in the attainment inventory even though it is located just outside the NAA because it is the largest source of SO<sub>2</sub> in the area.

The complete attainment emissions inventory for the entire NAA is presented in **Table 9**. Rayonier and WestRock are the largest sources of SO<sub>2</sub> emissions in or near the NAA. Area and Non-Road emissions for the area for 2013 are interpolated from the 2011 and 2014 NEI data for Nassau County. The 2013

---

<sup>14</sup> Procedures for Processing Requests to Redesignate Areas to Attainment. John Calcagni Memorandum dated September 4, 1992, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: [www.epa.gov/ozone-pollution/procedures-processing-requests-redesignate-areas-attainment](http://www.epa.gov/ozone-pollution/procedures-processing-requests-redesignate-areas-attainment)

<sup>15</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions. Stephen D. Page Memorandum dated April 23, 2014, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: <https://www.epa.gov/so2-pollution/guidance-1-hour-sulfur-dioxide-so2-nonattainment-area-state-implementation-plans-sip>

estimated emissions were then allocated to the NAA based on the NAA's fraction of land area within the county. On-Road emissions for the area are estimated with MOVES2014a and then allocated to the NAA based on the NAA's fraction of land area within the county. Further details on the data used to develop the attainment inventory can be found in **Appendix D**.

**Table 8:** 2013 SO<sub>2</sub> emissions inventory for the Rayonier (089-0004) and WestRock (089-0003) facilities in Nassau County.

Rayonier Facility SO <sub>2</sub> Emissions		
EU ID	Unit Description	2013 SO <sub>2</sub> Emissions (tons)
5	Vent Gas Scrubber	14.84
6	Recovery Boiler	470.56
22	No. 6 Power Boiler	6.30
<b>Total</b>		491.70
WestRock Facility SO <sub>2</sub> Emissions		
EU ID	Unit Description	2013 SO <sub>2</sub> Emissions (tons)
6	No. 5 Power Boiler	60.29
7	No. 4 Recovery Boiler	134.32
11	No. 5 Recovery Boiler	128.91
13	No. 4 Smelt Dissolving Tank	1.45
14	No. 5 Smelt Dissolving Tank	1.37
15	No. 7 Power Boiler	2,793.45
21	No. 4 Lime Kiln	26.70
<b>Total</b>		3,146.49
<b>Total All Point Sources</b>		3,638.19

**Table 9:** 2013 attainment emissions inventory for the Nassau County SO<sub>2</sub> nonattainment area.

Source Type	Point	Area	Non-Road	On-Road	Total
<b>2013 SO<sub>2</sub> Emissions (tons)</b>	3,638.19	0.72	0.01	0.11	<b>3,639.03</b>

## 2. Maintenance Demonstration

*A State may generally demonstrate maintenance of the NAAQS by either showing that future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory, or by modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS.*

Rayonier and WestRock are the largest sources of SO<sub>2</sub> emissions in or near the Nassau County SO<sub>2</sub> NAA. The EPA approved NAA plan for this area included an attainment modeling demonstration that showed compliance with the 2010 SO<sub>2</sub> NAAQS based on the facilities' current permitted emission rates. These permitted rates are based on a variety of control measures implemented at Rayonier and WestRock as a part of the NAA plan including a stack height increase and lower allowable SO<sub>2</sub> emission limits for units at Rayonier, and improvements to recovery boilers and a piping system for non-condensable gas combustion at WestRock. These control measures are permanent and enforceable through the federally-approved NAA SIP and the facilities' Title V operating permits. No major design or production changes have occurred at the facilities since the submittal of the NAA plan in 2015. All existing control measures will remain in effect after redesignation and any future sources will require similar measures unless the Department demonstrates through appropriate dispersion modeling that the NAAQS can be maintained.

**Table 10** below presents projected emissions inventories for the area every three years for the next 15 years. The Department is not aware of and does not anticipate any future development within the NAA that would increase SO<sub>2</sub> emissions. Therefore, the 2032 inventory and each of the interim year inventories is identical to the 2015 inventory for Point sources. Any increase in actual emissions from Rayonier and WestRock are required by permit to remain below the modeled emissions in **Appendix C** that demonstrate attainment of the NAAQS. Area and Non-Road emissions were estimated by projecting 2014 National Emissions Inventory (NEI) SO<sub>2</sub> emissions for these categories based on the projected population increase in Nassau County<sup>16</sup> and allocated to the NAA based on the NAA’s fraction of land area within the county. Increases in emissions in the Area and Non-Road sectors are insignificant in comparison to the large emissions from the Point source sector. On-Road SO<sub>2</sub> emissions are estimated from MOVES2014a and allocated to the NAA based on the NAA’s fraction of land area within the county; SO<sub>2</sub> emissions from the On-Road source sector remain very small. Further details on the data used to develop the projected future emissions inventories can be found in **Appendix D**.

**Table 10:** Projected future emissions inventories for the Nassau County SO<sub>2</sub> nonattainment area.

Source Type	Projected 2020 SO <sub>2</sub> Emissions (tons)	Projected 2023 SO <sub>2</sub> Emissions (tons)	Projected 2026 SO <sub>2</sub> Emissions (tons)	Projected 2029 SO <sub>2</sub> Emissions (tons)	Projected 2032 SO <sub>2</sub> Emissions (tons)
Point	3,638.19	3,638.19	3,638.19	3,638.19	3,638.19
Area	0.93	0.98	1.03	1.08	1.12
Non-Road	0.01	0.01	0.01	0.01	0.01
On-Road	0.05	0.05	0.05	0.04	0.04
<b>Total</b>	<b>3,639.18</b>	<b>3,639.23</b>	<b>3,639.28</b>	<b>3,639.32</b>	<b>3,639.37</b>

### 3. Monitoring Network

*Once an area has been redesignated, the State should continue to operate an appropriate air quality monitoring network, in accordance with 40 CFR Part 58, to verify the attainment status of the area.*

The Department currently operates one ambient SO<sub>2</sub> monitor in the NAA that meet all federal rules and regulations as described in **section 1** of the **Redesignation Request** above. The Department commits to maintaining an appropriate, well-sited monitoring network in the NAA through the maintenance plan period in order to verify the continued maintenance of the 2010 SO<sub>2</sub> NAAQS.

### 4. Verification of Continued Attainment

*Each State should ensure that it has the legal authority to implement and enforce all measures necessary to attain and maintain the NAAQS.*

Section 403.061(35), Florida Statutes, authorizes the Department to “exercise the duties, powers, and responsibilities required of the state under the federal Clean Air Act.” These duties and responsibilities include implementing and enforcing all measures necessary to attain and maintain the NAAQS. All measures necessary to attain and maintain the NAAQS have been implemented through the NAA plan. The Department will verify the continued attainment through the monitoring network. Additionally, Rayonier and WestRock’s required submittal of emissions data to the Department through its AOR will

<sup>16</sup> Population projections performed by: Florida Demographic Estimating Conference, February 2014 and the University of Florida, Bureau of Economic and Business Research, Florida Population Studies, Bulletin 168, April 2014, [http://edr.state.fl.us/Content/population-demographics/data/Medium\\_Projections.pdf](http://edr.state.fl.us/Content/population-demographics/data/Medium_Projections.pdf)

be used to verify continued compliance with the permitted emissions rates that were shown through the modeling demonstration in the NAA plan to be sufficient to provide for maintenance of the NAAQS throughout the NAA. Any increases in actual emissions from Rayonier or WestRock, the largest SO<sub>2</sub> sources in or near the NAA, must remain below their permitted levels, which were made federally-enforceable through the NAA Plan and Title V operating permits, and which will continue to be federally-enforceable throughout the duration of this Maintenance Area SIP. Any potential future SO<sub>2</sub> emissions sources that may locate in or near the NAA would be required to comply with the Department's approved NSR permitting program, either NNSR or prevention of significant deterioration (PSD) review, to ensure that the area will continue to meet the NAAQS. The Department's SIP-approved NNSR and PSD permitting program is outlined in Chapters 62-204, 62-210, and 62-212, F.A.C. and require any new major source or major modification to undergo PSD or NNSR permitting.

## 5. Contingency Plan

*CAA section 175A requires that a maintenance plan include contingency provisions, as necessary, to promptly correct any violation of the NAAQS that occurs after redesignation of the area.*

In the "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," published on April 16, 1992 at 57 Fed. Reg. 13,498, EPA expressly discussed contingency measures for SO<sub>2</sub>. This guidance states that in many cases, as is the case with Florida's Nassau County NAA, attainment revolves around compliance of a single source or small set of sources with emission limits shown to provide for attainment. This guidance concludes that in such cases, "EPA interprets 'contingency measures' to mean that the state agency has a comprehensive program to identify sources of violations of the SO<sub>2</sub> NAAQS and to undertake an aggressive follow-up for compliance and enforcement including expedited procedures for establishing enforceable consent agreements pending the adoption of revised SIPs." EPA's memo *Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*<sup>17</sup> further states that although the guidance discussed above applies to contingency measures for nonattainment plans under section 172(c)(9), the guidance may also be applied with respect to contingency measures required in maintenance plans under section 175A(d).

The following specific contingency measures, which were part of the NAA SIP, shall continue to apply as part of the Maintenance Area SIP:

The Department's Office of Air Monitoring reviews the monitoring network daily for potential exceedances and submits an exceedance notification and confirmation to the Department and EPA on the business day following any monitored exceedance. Upon notification by the Department's Office of Air Monitoring that the Fernandina Beach monitor (12-089-0005) has registered SO<sub>2</sub> levels in excess of the standard (75 ppb 1-hour daily maximum concentration) for a fourth time during a calendar year, the Department will then notify Rayonier and WestRock of the occurrence of a fourth high exceedance. Upon notification by the Department of a confirmed fourth high exceedance,<sup>18</sup> Rayonier and WestRock will, without any further action by the Department or the EPA, immediately undertake a full system audit of all emissions units subject to control under the NAA plan. Rayonier and WestRock will each independently submit to the Department in writing, within 10 days of the fourth registered exceedance, a written system audit report detailing the operating parameters of all emissions units for four 10-day periods up to and including the dates upon which the Fernandina Beach monitor registered each of the

---

<sup>17</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions. Stephen D. Page Memorandum dated April 23, 2014, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: <https://www.epa.gov/so2-pollution/guidance-1-hour-sulfur-dioxide-so2-nonattainment-area-state-implementation-plans-sip>

<sup>18</sup> Confirmation of a fourth high exceedance over the SO<sub>2</sub> NAAQS would be made after quality assurance activities are completed, but not necessarily with Department-certified data.



four exceedances, together with recommended provisional SO<sub>2</sub> emission control strategies for each affected unit and evidence that these control strategies have been deployed, as appropriate.

Upon receipt of these written system audit reports, the Department will immediately begin a 30-day evaluation period to diagnose the cause of the monitored exceedance. This will be followed by a 30-day consultation period with Rayonier and/or WestRock to develop and implement operational changes. At the completion of this consultation period, the Department will mandate operational changes identified by the written system audit to prevent any future monitored violation of the standard. These changes could include, but would not be limited to, fuel switching to reduce or eliminate the use of sulfur-containing fuels, combustion air system enhancement, vent gas scrubber enhancement, white liquor scrubber system enhancement, and physical or operational reduction of production capacity, as appropriate. Any necessary changes would be implemented as soon as practicable, with at least one implemented within 18-24 months of the monitored violation, in order to bring the area into attainment as expeditiously as possible.

The Department would rely on its authority outlined in Rule 62-4.080, F.A.C., which expressly authorizes the Department to require the permittee to conform to new or additional conditions if there is a showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air quality standards. If a permit modification is deemed necessary, the Department would issue a final permit within the statutory timeframes required in Sections 120 and 403, Florida Statutes, and any new emissions limits required by such a permit would be submitted to EPA as a SIP revision.

The attainment modeling demonstration within the NAA plan for the area (and attached to this document as **Appendix C**) is still applicable and is sufficient evidence of continued maintenance of the SO<sub>2</sub> NAAQS into the foreseeable future. EPA's *Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*<sup>19</sup> further states that the attainment plan for SO<sub>2</sub> can serve as the maintenance plan for the area, and that because the modeling demonstration for the NAA plan relies on allowable emissions, it demonstrates that the standard will be maintained and provide maintenance for the 10-year period and beyond.

---

<sup>19</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions. Stephen D. Page Memorandum dated April 23, 2014, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, available at: <https://www.epa.gov/so2-pollution/guidance-1-hour-sulfur-dioxide-so2-nonattainment-area-state-implementation-plans-sip>

## Response to 40 CFR Part 51, Appendix V, Criteria

Pursuant to 40 CFR Part 51, Appendix V, the following materials shall be included in State Implementation Plan (SIP) submissions for review and approval by the U.S. Environmental Protection Agency (EPA).

### 1. Administrative Materials

- a. **A formal letter of submittal from the Governor or his designee, requesting EPA approval of the plan or revision thereof (hereafter “the plan”).**

A Pre-Hearing Submittal Letter signed by the Director of the Division of Air Resource Management, Florida Department of Environmental Protection (Department), on behalf of the Governor of the State of Florida, is attached to this Pre-Hearing SIP Submittal.

- b. **Evidence that the State has adopted the plan in the State code or body of regulations; or issued the permit, order, consent agreement (hereafter “document”) in final form. That evidence shall include the date of adoption or final issuance as well as the effective date of the plan, if different from the adoption/issuance date.**

This Maintenance SIP relies on two air construction permits, Permit No. 0890004-036-AC, issued on April 12, 2012, and Permit No. 0890003-046-AC, issued on January 9, 2015. These two permits were made federally-enforceable as part of Florida’s approved NAA Plan.

- c. **Evidence that the State has the necessary legal authority under State law to adopt and implement the plan.**

The Department has the necessary legal authority to adopt and implement this proposed revision to Florida’s SIP. References to the pertinent Florida Statutes and Florida Administrative Code (F.A.C.) rules may be found in the “Legal Authority” section of this submittal.

- d. **A copy of the actual regulation, or document submitted for approval and incorporation by reference into the plan, including indication of the changes made (*such as, redline/strikethrough*) to the existing approved plan, where applicable. The submittal shall include a copy of the official State regulation/document signed, stamped and dated by the appropriate State official indicating that it is fully enforceable by the State. The effective date of any regulation/document contained in the submission shall, whenever possible, be indicated in the regulation/document itself. *If the State submits an electronic copy, it must be an exact duplicate of the hard copy with changes indicated, signed documents need to be in portable document format, rules need to be in text format and files need to be submitted in manageable amounts (e.g., a file for each section or chapter, depending on size, and separate files for each distinct document) unless otherwise agreed to by the State and Regional Office.***

See air construction permits 0890004-036-AC and 0890003-046-AC issued by the Florida Department of Environmental Projection on April 12, 2012 and January 9, 2015, respectively, incorporated into Florida’s SIP through the Nassau County SO<sub>2</sub> NAA plan.

- e. **Evidence that the State followed all of the procedural requirements of the State’s laws and constitution in conducting and completing the adoption/issuance of the plan.**

State law (Section 120.525, F.S.) requires the Department to give notice of public meetings, hearings, and workshops by publication in the Florida Administrative Register (FAR) not less than seven days before the event. Through publication in the FAR of the notice of opportunity to participate in a public hearing, if requested, at least 30 days before the event, the Department has

complied with all state procedural requirements relevant to the development of this proposed SIP revision. A copy of the notice of proposed SIP revision may be found in the “Public Participation” section of this submittal.

**f. Evidence that public notice was given of the proposed change consistent with procedures approved by EPA, including the date of publication of such notice.**

The Department has complied with all public hearing requirements of 40 CFR 51.102. Copies of all relevant notices and notification emails may be found in the “Public Participation” section of this submittal.

**g. Certification that public hearing(s) were held in accordance with the information provided in the public notice and the State’s laws and constitution, if applicable and consistent with the public hearing requirements in 40 CFR 51.102.**

Certification of compliance with all state and federal public notice and hearing requirements will be provided in the “Letter of Submittal” for the final SIP revision.

**h. Compilation of public comments and the State’ response thereto.**

Written comments received during the public notice period on this proposed SIP revision, and the Department’s response thereto, will be included in the “Public Participation” section of this submittal.

**2. Technical Support**

**a. Identification of all regulated pollutants affected by the plan.**

This SIP revision addresses only the air pollutant sulfur dioxide (SO<sub>2</sub>).

**b. Identification of the locations of affected sources including the EPA attainment/nonattainment designation of the locations and the status of the attainment plan for the affected areas(s).**

This SIP revision applies to the SO<sub>2</sub> nonattainment area in Nassau County defined as follows:

*That portion of Nassau County encompassing the circular boundary with the center being UTM Easting 455530 meters, UTM Northing 3391737 meters, UTM zone 17, using the NAD83 datum (the location of the violating ambient monitor) and the radius being 2.4 kilometers.*

**c. Quantification of the changes in plan allowable emissions from the affected sources; estimates of changes in current actual emissions from affected sources or, where appropriate, quantification of changes in actual emissions from affected sources through calculations of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.**

See the Redesignation Request section of this submittal.

**d. The State’s demonstration that the national ambient air quality standards, prevention of significant deterioration increments, reasonable further progress demonstration, and visibility, as applicable, are protected if the plan is approved and implemented. For all requests to redesignate an area to attainment for a national primary ambient air quality standard, under section 107 of the Act, a revision must be submitted to provide for the maintenance of the national primary ambient air quality standards for at least 10 years as required by section 175A of the Act.**

See the Redesignation Request section of this submittal.

- e. **Modeling information required to support the proposed revision, including input data, output data, models used, justification of model selections, ambient monitoring data used, meteorological data used, justification for use of offsite data (where used), modes of models used, assumptions, and other information relevant to the determination of adequacy of the modeling analysis.**

See Appendix C of this submittal.

- f. **Evidence, where necessary, that emission limitations are based on continuous emission reduction technology.**

See air construction permits 0890004-036-AC and 0890003-046-AC issued by the Florida Department of Environmental Protection on April 12, 2012 and January 9, 2015, respectively, incorporated into Florida's SIP through the Nassau County SO<sub>2</sub> NAA plan.

- g. **Evidence that the plan contains emission limitations, work practice standards and recordkeeping/reporting requirements, where necessary, to ensure emission levels.**

See air construction permits 0890004-036-AC and 0890003-046-AC issued by the Florida Department of Environmental Protection on April 12, 2012 and January 9, 2015, respectively, incorporated into Florida's SIP through the Nassau County SO<sub>2</sub> NAA plan.

- h. **Compliance/enforcement strategies, including how compliance will be determined in practice.**

See air construction permits 0890004-036-AC and 0890003-046-AC issued by the Florida Department of Environmental Protection on April 12, 2012 and January 9, 2015, respectively, incorporated into Florida's SIP through the Nassau County SO<sub>2</sub> NAA plan.

- i. **Special economic and technological justifications required by any applicable EPA policies, or an explanation of why such justifications are not necessary.**

Not Applicable.

### **3. Exceptions**

Not applicable.

## Legal Authority

Chapter 403 of the Florida Statutes (F.S.), entitled “Environmental Control,” provides the legal framework for most of the activities of the air resource management program within the Florida Department of Environmental Protection (Department). Except as provided at sections 403.8055 and 403.201, F.S., for fast-track rulemaking and the granting of variances under Chapter 403, F.S., respectively, Chapter 120, F.S., Florida’s “Administrative Procedure Act,” sets forth the procedures the Department must follow for rulemaking, variances, and public meetings. The most recent version of the Florida Statutes can be found online at <http://www.leg.state.fl.us/Statutes>.

The principal sections of Chapter 403, F.S., that grant the Department authority to operate its air program are listed below. Authority to develop and update Florida’s State Implementation Plan (SIP) and 111(d) Designated Facilities Plan is expressly provided by subsection 403.061(35), F.S., which provides that the Department shall have the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules adopted and promulgated by it and, for this purpose, to “exercise the duties, powers, and responsibilities required of the state under the federal Clean Air Act, 42 U.S.C. ss. 7401 et seq.”

- [403.031](#) Definitions, including the definition of “regulated air pollutant” (403.031(19)).
- [403.061](#) Authority to: promulgate plans to provide for air quality control and pollution abatement (403.061(1)); adopt rules for the control of air pollution in the state (403.061(7)); take enforcement action against violators of air pollution laws, rules and permits (403.061(8)); establish and administer an air pollution control program (403.061(9)); set ambient air quality standards (403.061(11)); monitor air quality (403.061(12)); require reports from air pollutant emission sources (403.061(13)); require permits for construction, operation, and modification of air pollutant emission sources (403.061(14)); and exercise the duties, powers, and responsibilities required of the state under the federal Clean Air Act (403.061(35)).
- [403.087](#) Authority to issue, deny, modify, and revoke permits.
- [403.0872](#) Authority to establish an air operating permit program as required by Title V of the Clean Air Amendments of 1990.
- [403.0877](#) Authority to require engineering certification of permit applications.
- [403.121](#) Authority to seek judicial and administrative remedies for violations.
- [403.131](#) Authority to seek injunctive relief for violations.
- [403.141](#) Authority to find civil liability for violations.
- [403.161](#) Authority to assess civil and criminal penalties for violations.
- [403.182](#) Authority for local pollution control programs.
- [403.201](#) Authority to grant variances.
- [403.8052](#) Authority to establish a Small Business Assistance Program for small-business sources of air pollutant emissions.
- [403.8055](#) Authority to adopt U.S. Environmental Protection Agency (EPA) standards by reference through a fast-track process.
- [403.814](#) Authority to allow use of general permits (permits-by-rule) for minor sources.

Other statutory authorities, outside of Chapter 403, F.S., for Florida's air program are as follows:

- [112.3143](#) Requirement that public officials disclose potential conflicts of interest.
- [112.3144](#) Requirement for disclosure of financial interests by public officials.
- [120.569](#) Authority of agency head to issue an emergency order in response to an immediate threat to public health, safety, or welfare.
- [316.2935](#) Authority to prohibit the sale and operation of motor vehicles whose emission control systems have been tampered with, and to prohibit the operation of motor vehicles that emit excessive smoke.
- [320.03](#) Authority to establish Air Pollution Control Trust Fund and use \$1 fee on every motor vehicle license registration sold in the state for air pollution control purposes, including support of approved local air pollution control programs.
- [376.60](#) Authority to establish a fee for asbestos removal projects.

Current and historical versions of Florida Administrative Code (F.A.C.) rule sections and chapters back to January 1, 2006, may be accessed from the Florida Department of State (DOS) website <https://www.flrules.org>. The DOS website also provides access to materials adopted by reference since January 1, 2011. Department rule chapters containing State Implementation Plan (SIP) or 111(d) State Plan provisions are as follows:

- [62-204](#) Air Pollution Control – General Provisions
- [62-210](#) Stationary Sources – General Requirements
- [62-212](#) Stationary Sources – Preconstruction Review
- [62-243](#) Tampering with Motor Vehicle Air Pollution Control Equipment
- [62-252](#) Gasoline Vapor Control
- [62-256](#) Open Burning
- [62-296](#) Stationary Sources – Emission Standards
- [62-297](#) Stationary Sources – Emissions Monitoring

Other air-related Department rule chapters—not part of the SIP or 111(d) State Plan—include:

- [62-213](#) Operation Permits for Major Sources of Air Pollution (Title V)
- [62-214](#) Requirements for Sources Subject to the Federal Acid Rain Program
- [62-257](#) Asbestos Program

# Notice of Opportunity to Submit Comments and Participate in Public Hearing

Persons may also contact: Terri Long at (850)717-9023 to find out if the hearing has been cancelled. Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 48 hours before the workshop/meeting by contacting: Terri Long at (850)717-9023 or Terri.Long@dep.state.fl.us. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, (800) 955-8771 (TDD) or (800) 955-8770 (Voice).

For more information, you may contact: Hastings Read by letter or e-mail, or by calling (850)717-9017.

---

## DEPARTMENT OF ENVIRONMENTAL PROTECTION

The Department of Environmental Protection, Division of Air Resource Management, announces a hearing, if requested, to which all persons are invited.

DATE AND TIME: June 1, 2018, 10:00 a.m.

PLACE: Department of Environmental Protection, Bob Martinez Center, 2600 Blair Stone Road, Room 195, Tallahassee, Florida

## GENERAL SUBJECT MATTER TO BE CONSIDERED:

Pursuant to 40 CFR 51.102, the Department of Environmental Protection (DEP) announces a public hearing and opportunity to offer comments on a proposed revision to Florida's State Implementation Plan (SIP) under the Clean Air Act. This proposed SIP revision consists of a request to redesignate the portion of Nassau County that is designated as "nonattainment" with respect to the 2010 revised sulfur dioxide (SO<sub>2</sub>) national ambient air quality standard (NAAQS) to "attainment" and a request to approve an associated maintenance SIP that will ensure the continued attainment of the 2010 SO<sub>2</sub> NAAQS in the area. The materials comprising DEP's proposed SIP revision may be obtained through the Department's website at <https://floridadep.gov/air/air-business-planning/content/air-regulatory-projects> or by contacting: Hastings Read at Hastings.Read@dep.state.fl.us. The materials may also be inspected during normal business hours at DEP, Division of Air Resource Management offices, Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida. A public hearing will be held, if requested, at the date, time and place given above. Any request for a public hearing must be submitted by letter or e-mail to: Hastings Read, Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, MS #5500, Tallahassee, Florida 32399-2400, (Hastings.Read@dep.state.fl.us), and received no later than May 29, 2018. A copy of the agenda may be obtained by contacting: Mr. Read by letter or email at the above addresses or by calling (850) 717-9017. It is not necessary that the hearing be held or attended for persons to comment on DEP's proposed submittal to EPA. Any comments must be submitted to

Hastings Read by letter or e-mail, with a copy to: Terri Long, (Terri.Long@dep.state.fl.us), and received no later than May 29, 2018.

If no request for a public hearing is received, the hearing will be cancelled, and notice of the cancellation will be posted at the following website:

[https://floridadep.gov/events/month?field\\_county\\_tid=All&field\\_is\\_a\\_public\\_notice\\_value=Yes](https://floridadep.gov/events/month?field_county_tid=All&field_is_a_public_notice_value=Yes).

Persons may also contact: Terri Long at (850)717-9023 to find out if the hearing has been cancelled. Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 48 hours before the workshop/meeting by contacting: Terri Long at (850)717-9023 or Terri.Long@dep.state.fl.us. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

For more information, you may contact: Hastings Read by letter or e-mail, or by calling (850)717-9017.

---

## DEPARTMENT OF HEALTH

Board of Clinical Social Work, Marriage and Family Therapy and Mental Health Counseling

The Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling announces a telephone conference call to which all persons are invited.

DATE AND TIME: June 6, 2018, 9:00 a.m., ET

PLACE: 1(888)670-3525 when prompted, enter conference code: 4552635641#

GENERAL SUBJECT MATTER TO BE CONSIDERED: Probable Cause Panel with a reconsideration.

A copy of the agenda may be obtained by contacting: [www.floridasmentalhealthprofessions.gov](http://www.floridasmentalhealthprofessions.gov). If any person decides to appeal any decision made by the Board with respect to any matter considered at this meeting, he/she will need to ensure that a verbatim record of the proceeding is made, which record includes the testimony and evidence upon which the appeal is to be made. Those who are hearing impaired, using TDD equipment can call the Florida Telephone Relay System at 1(800)955-8771. Persons requiring special accommodations due to disability or physical impairment should contact: the Board Office at (850)245-4474.

---

## DEPARTMENT OF HEALTH

Division of Children's Medical Services

The Florida Department of Health announces a telephone conference call to which all persons are invited.

DATE AND TIME: May 22, 2018, 3:00 p.m. – 5:00 p.m.

PLACE: 1(888)670-3525, participant code: 2883350850

GENERAL SUBJECT MATTER TO BE CONSIDERED: Genetics and Newborn Screening Task Force. The purpose of

## **Public Participation**

Documentation will be added upon completion of the 30-day comment period for the pre-hearing submittal and public notice.



## Appendix A – Rayonier Air Construction Permit (0890004-036-AC)



### Florida Department of Environmental Protection

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256

Rick Scott  
Governor

Jennifer Carroll  
Lt. Governor

Herschel T. Vinyard Jr.  
Secretary

#### PERMITTEE

Rayonier Performance Fibers, LLC  
PO Box 2002  
Fernandina Beach, FL 32035

Authorized Representative:  
Mr. C. A. McDonald, General Manager

Air Permit No. 0890004-036-AC  
Permit Expires: December 31, 2014  
Issue Date: April 12, 2012  
Fernandina Beach Sulfite Pulp Mill  
ARMS ID No. 0890004  
Sulfur Dioxide Project

#### PROJECT AND LOCATION

The permittee is authorized to construct a new, taller stack for the Vent Gas Scrubber System (EU No. 005) and to extend the stack at the Power Boiler (EU No. 022), if needed; and lower the allowable SO<sub>2</sub> emission limits for the Recovery Boiler (EU No. 006), Power Boiler (EU No. 022), and the Vent Gas Scrubber System (EU No. 005). Implementing these voluntary changes at the Fernandina Beach mill will lower the modelled SO<sub>2</sub> impact from the Rayonier Performance Fibers, LLC facility on the ambient air of Nassau County. The new Sulfur Dioxide Project is not intended or expected to result in an increase in mill production capacity. The proposed work will be conducted at the Fernandina Beach Pulp Mill, which is a Sulfite Pulp Mill (Standard Industrial Classification No. 2611). The existing facility is located in Nassau County at the foot of Gum Street in Fernandina Beach, Florida. The UTM coordinates are Zone 14: 454.7 km East; 3392.2 km North.

#### STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.); and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

[www.dep.state.fl.us](http://www.dep.state.fl.us)

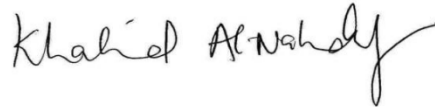
continued from page 1

---

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Unit Specific Conditions
- Section 4. Appendices

Executed in Jacksonville, Florida

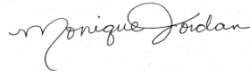


---

Khalid A. Al-Nahdy, P.E.  
District Air Program Administrator

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.



---

(Clerk)

4/12/2012  
(Date)

---

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

Page 2 of 12

## SECTION 1. GENERAL INFORMATION

---

### SUBSECTION A. FACILITY DESCRIPTION

The mill uses a sulfite (ammonia-base) process to produce various grades of chemical cellulose from pine wood-chips. There are only two other pulp mills located in the United States that produce products similar to the Fernandina Mill and neither of these mills use the same type of manufacturing process. This plant produces approximately 10 different grades of cellulose each with different specifications and customers. The amount of each grade of product that is produced is based on market demand. The cellulose produced at this mill goes into such products as plastics, photographic film, LCD screens, paints, cigarette filters, pharmaceuticals, food products, cosmetics and textiles. Customers of these products have stringent quality requirements. The mill is permitted (Permit No. 0890004-029-AV) to produce 165,852 ADMT of pulp on a 12 month rolling total basis.

The existing facility consists of the following emissions units.

E.U. ID No.	Brief Description
005	Vent Gas Scrubber and Direct Contact Condenser
006	Sulfite Recovery Boiler firing RLS, No. 6 fuel oil, and No. 2 fuel oil
007	Molten sulfur handling area.
010	Biological Effluent Treatment System
011	Dissolving-Grade Bleaching System
021	Evaporator Vents Methanol Condenser
022	Bubbling Fluidized Bed No. 6 Power Boiler

Unregulated Emissions Units and/or Activities: *Refer to Appendix U-1, List of Unregulated Emissions Units and/or Activities*

The proposed project will affect the following emissions unit(s).

E.U. ID No.	Brief Description
005	Vent Gas Scrubber and Direct Contact Condenser
006	Sulfite Recovery Boiler firing Red Liquor Solids, No. 6 fuel oil, and No. 2 fuel oil
022	Bubbling Fluidized Bed No. 6 Power Boiler

### PROJECT DESCRIPTION

The permittee is authorized to construct a new, taller stack for the Vent Gas Scrubber System (EU No. 005) and to extend the stack at the Power Boiler (EU No. 022), if needed; lower the allowable SO<sub>2</sub> emission limits for the Recovery Boiler (EU No. 006), Power Boiler (EU No. 022), and the Vent Gas Scrubber System (EU No. 005). Implementing these voluntary changes at the Fernandina Beach mill will lower the modeled SO<sub>2</sub> impact from the Rayonier Performance Fibers, LLC facility on the

---

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

## SECTION 1. GENERAL INFORMATION

---

ambient air of Nassau County. The new Sulfur Dioxide Project is not intended or expected to result in an increase in mill production capacity.

### FACILITY REGULATORY CLASSIFICATION

- 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 (CAA).
- 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(PSD), F.A.C.
- This facility is a major source of air pollutants, other than HAPs.
- This facility has one or more emissions units subject to NSPS (40 CFR 60).
- This facility has one or more emissions units subject to NESHAP (40 CFR Part 61 or Part 63)

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

---

1. **Permitting Authority:** The permitting authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Air Resources Section. The Northeast District Office's mailing address is 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7590. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District.
2. **Compliance Authority:** All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office. The mailing address and phone number of the District Office is: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256. The Permitting Authority's telephone number is 904/256-1700.
3. **Appendices:** The following Appendices are attached as part of this permit:
  - a. Appendix A. Citation Formats and Glossary of Common Terms;
  - b. Appendix B. General Conditions;
  - c. Appendix C. Common Conditions
4. **Applicable Regulations, Forms and Application Procedures:** Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. **New or Additional Conditions:** For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. **Modifications:** The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1) (a), F.A.C.]
7. **Source Obligation:**
  - a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
  - b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

---

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

---

[Rule 62-212.400(12), F.A.C.]

8. Application for Title V Permit: This permit authorizes construction/modification of the permitted emissions units and initial operation. A Title V air operation permit is required for continued operation of the permitted emissions unit(s). The permittee shall apply for a Title V air operation permit revision at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation of the new equipment, whichever occurs first. To apply for a Title V operation permit revision, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting and Compliance Authority.  
[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

---

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A - Sulfur Dioxide Project -- Vent Gas Scrubber and Direct Contact Condenser**

This section of the permit addresses the following emissions unit.

Emissions Unit Number	Brief Description
005	<p>Emission Unit 005 identifies the Vent Gas Scrubber and Direct Contact Condenser. The permittee is authorized to construct a new, taller stack for the Vent Gas Scrubber System (EU No. 005). The existing stack is approximately 110 feet high. The proposed new stack will be at least 165 feet high. The applicant has also proposed to lower the maximum allowable emission limit for sulfur dioxide emissions from 250 ppm to 100 ppm.</p> <p>The vent gas scrubber (wet scrubber), which controls emissions from numerous vents from the cooking acid plant, the red stock washers, the unwashed stock tank, the spent sulfite liquor storage tanks, the spent sulfite liquor washer area, the digesters (6), and the blow pits. The scrubber is a packed bed containing 10 feet of packing consisting of two packed sections. The lower section is designed for sulfur dioxide emissions control via gas absorption using alkaline scrubbing media (soda ash, sodium hydroxide, etc.). The spent scrubber media is bled first to other closed sources to make maximum use of the alkali to remove sulfur dioxide, and then to sewer via closed piping to number 1 Pump Station. The sulfur dioxide concentration in the stack is continuously measured with a CMS.</p> <p>The upper packed section of the vent gas scrubber is designed to condense methanol from the gas stream by direct contact with fresh well water, i.e. the Direct Contact Condenser. This is a once through process.</p> <p>The condensed methanol held in the water is sent to the biological effluent treatment system for treatment in order to comply with the requirements of 40 CFR 63 Subpart S.</p> <p>This emissions unit has a CMS required for compliance purposes, therefore, it is exempt from CAM for SO<sub>2</sub> monitoring.</p>

**PERFORMANCE RESTRICTIONS**

A.1. Capacities: The proposed work shall not result in any increase in the mill pulp production rate.

[Rule 62-4.070(3), F.A.C. and Application No. 0890004-36-AC]

A.2. Hours of Operation. This emissions unit shall be allowed to operate continuously, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

**EMISSION LIMITATIONS AND STANDARDS**

A.3. The permittee has determined to lower the allowable sulfur dioxide emission rate from 250 ppm to 100 ppm (3 hour average) as part of the program to lower the modeled SO<sub>2</sub> impact

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

---

**A - Sulfur Dioxide Project -- Vent Gas Scrubber and Direct Contact Condenser**

from the Rayonier Performance Fibers, LLC facility on the ambient air of Nassau County. The 100 ppm (3 hour average) SO<sub>2</sub> limit shall become the emission limiting standard on the effective date of the Title V Air Operating Permit revision unless otherwise established by order, rule, permit, agreement, or State Implementation Plan.

[Rule 62-4.070(3), F.A.C.]

**REPORTING REQUIREMENTS**

- A.4. The permittee shall report to the Department the commencement of construction date of the new stack system within 30 days after beginning construction.

[Rule 62-4.070(3), F.A.C.]

- A.5. The permittee shall report to the Department the completion of construction date of the new stack system within 30 days after completing construction. As built stack parameters shall be described and submitted with this report.

[Rule 62-4.070(3), F.A.C.]



SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B - Sulfur Dioxide Project -- Recovery Boiler

This section of the permit addresses the following emissions unit.

Emissions Unit Number	Brief Description
006	<p>Emission Unit 006 identifies the Recovery Boiler. Combustion gases from the boiler and noncondensable gases from the evaporators are controlled through a multi-stage wet scrubber that utilizes ammonium hydroxide as the scrubbing medium. This absorption process produces a fine, aerosol type particulate, which is subsequently controlled by a filter unit, the Brinks Demister. The Brinks Demister consists of four, enclosed rubber-lined metal compartments each containing 52 candles. Each candle is a 24-inch diameter, 12-foot high cylinder with 6 inches of tightly wound polyester fiber filter held within a concentric wire cage. Gases flow up through the center of each candle then pass through the 6 inches of filter medium, out an opening near the top of the compartment and on to the stack.</p> <p>The sulfur dioxide concentration within the stack is measured continuously using a CMS, therefore this emissions unit is exempt from CAM.</p> <p>The BetaGuard Particulate Monitor is the CMS utilized to demonstrate compliance with 40 CFR 63 Subpart MM.</p>

{Permitting note(s): This emissions unit is subject to Rule 17-2.03, F.A.C., Latest Reasonable Available Control Technology (LRACT dated 07-12-76), which was based on Washington State Standards for Sulfite Pulp Mills (WAC 18-38-040). This rule became 17-2.630, F.A.C. which became Best Available Control Technology (BACT) now Rule 62-212.400(6), F.A.C. This emissions unit was issued Final Order dated June 19, 1991, which included Alternate Sampling Procedure No. ASP-91-H-01, which approved the continual operation of the Brinks Demister System in lieu of meeting the general visible emissions standard of less than 20% opacity as measured by EPA Method 9. This emissions unit is also regulated under NESHAP - 40 CFR 63, Subpart MM, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

PERFORMANCE RESTRICTIONS

- B.1. Capacities: The proposed work shall not result in any increase in the mill pulp production rate.  
[Rule 62-4.070(3), F.A.C. and Application No. 0890004-36-AC]
- B.2. Hours of Operation. This emissions unit shall be allowed to operate continuously, i.e., 8,760 hours/year.  
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

EMISSION LIMITATIONS AND STANDARDS

- B.3. The permittee has determined to lower the allowable sulfur dioxide emission rate from 300 ppmvd to 250 ppmvd (3 hour average) as part of the program to lower the modeled SO<sub>2</sub>

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

---

**B - Sulfur Dioxide Project -- Recovery Boiler**

impact from the Rayonier Performance Fibers, LLC facility on the ambient air of Nassau County. The 250 ppmvd (3 hour average) SO<sub>2</sub> limit shall become the emission limiting standard on the effective date of the Title V Air Operating Permit revision unless otherwise established by order, rule, permit, agreement, or State Implementation Plan.

[Rule 62-4.070(3), F.A.C.]

---

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

Page 10 of 12

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C - Sulfur Dioxide Project -- No. 6 Power Boiler**

Emissions Unit Number	Brief Description
022	<p>The No. 6 Power Boiler is a Bubbling Fluidized Bed boiler that produces steam for electrical generation and usage in the manufacturing process. The total maximum operational heat input of this emissions unit is 525 MMBtu/hr (24-hr average). The boiler was originally constructed in 1983 as a traveling grate coal-fired boiler.</p> <p><i>Fuel:</i> This unit is authorized to fire biomass (green bark, chips, knots, fines, and landscape waste), tires, No. 2 fuel oil for startup, No. 6 fuel oil with a maximum sulfur content of 2.5% by weight, spent sulfite liquor, small quantities of facility-generated on-specification used oil (to be blended with the No. 6 fuel oil); and mill effluent treatment system solids (primary and secondary sludge only).</p> <p><i>Controls:</i> Particulate matter emissions are controlled with a large settling chamber followed by an electrostatic precipitator (ESP). Large ash particles settle out in the chamber and are removed from the bottom hopper by a screw conveyor system. The design includes a four-field ESP with collector plates and rigid electrodes. Each field has a dedicated transformer/rectifier (T/R) set and ash hopper. Ash is removed by a screw conveyor system. NO<sub>x</sub> emissions are reduced by staged combustion and flue gas recirculation (FGR). A selective non-catalytic reduction (SNCR) system is installed to control NO<sub>x</sub> emissions (may be used as determined by plant personnel). This system consists of an ammonia tank, pumps, piping, compressed air delivery, injectors, and a control system. Acid gases are controlled by a wet alkaline scrubber located after the ESP and induced draft fan. The wet scrubber sprays approximately 4000 gpm of re-circulated alkaline scrubber water over a series of chevrons and louver-type packing to reduce acid gas emissions. The design pressure drop across the system is approximately 2 inches of water column.</p> <p><i>Monitors:</i> A continuous opacity monitoring system (COMS); a fuel flow monitor; continuous monitoring of ESP total power (CAM); exhaust flow rate monitor; a continuous emissions monitoring system (CEMS) for SO<sub>2</sub> emissions, a CEMS for NO<sub>x</sub> emissions, a CEMS for CO emissions, and a CEMS for oxygen.</p> <p><i>Stack Parameters:</i> Exhaust gas exits at approximately 150 °F with a volumetric flow rate of 183,421 acfm through a single wet scrubber stack that is approximately 10 feet in diameter and 190 feet above ground level. The proposed new stack height will be approximately 210 feet (if the permittee decides to raise the stack height). The applicant has also proposed to lower the maximum allowable emission limit for sulfur dioxide emissions from 420 Pounds per hour (lbs/hr) to 180 lbs/hr (3 hour block average at the current stack height of 190 feet) or 250 lbs/hr (3 hour block average at the new stack height of 210 feet).</p>

*{Permitting note (s): This emissions unit is regulated under: Rule 296.410, F.A.C. –Carbonaceous Fuel Burning Equipment; Rule 62-296.405, F.A.C. – Fossil Fuel Steam Generators with More Than 250 Million Btu Per Hour Heat Input; NSPS - 40 CFR 60, Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971, adopted and incorporated by*

Rayonier Performance Fibers, LLC  
Fernandina Beach Mill

Air Permit No. 0890004-036-AC  
Sulfur Dioxide Project

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C - Sulfur Dioxide Project -- No. 6 Power Boiler

reference in Rule 62-204.800, F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); Compliance Assurance Monitoring (CAM), adopted and incorporated by reference in Rule 62-204.800, F.A.C.]

- C.1. Capacities: The proposed work shall not result in any increase in the mill pulp production rate.  
[Rule 62-4.070(3), F.A.C. and Application No. 0890004-36-AC]
- C.2. Hours of Operation. This emissions unit shall be allowed to operate continuously, i.e., 8,760 hours/year.  
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

#### EMISSION LIMITATIONS AND STANDARDS

- C.3. The permittee has determined to lower the allowable sulfur dioxide emission rate to 180 lbs/hr (3 hour average) or 250 lbs/hr (3 hour average) as part of the program to lower the modeled SO<sub>2</sub> impact from the Rayonier Performance Fibers, LLC facility on the ambient air of Nassau County. The 180 lbs/hr (3 hour average) or 250 lbs/hr (3 hour average) SO<sub>2</sub> limit shall become the emission limiting standard on the effective date of the Title V Air Operating Permit revision unless otherwise established by order, rule, permit, agreement, or State Implementation Plan.  
[Rule 62-4.070(3), F.A.C.]

*{Permitting note: The proposed limit will be:*

- a. 180 lbs/hr(3 hour average) at the current stack height of 190 feet
- b. 250 lbs/hr(3 hour average) if the stack height is raised to 210 feet}

#### REPORTING REQUIREMENTS

- C.4. \*The permittee shall report to the Department the commencement of construction date of the new stack system within 30 days after beginning construction.  
[Rule 62-4.070(3), F.A.C.]
- C.5. \*The permittee shall report to the Department the completion of construction date of the new stack system within 30 days after completing construction. As built stack parameters shall be described and submitted with this report.  
[Rule 62-4.070(3), F.A.C.]

\* If the stack height is raised

# Appendix B – WestRock Air Construction Permit (0890003-046-AC)



## FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTINEZ CENTER  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT  
GOVERNOR

CARLOS LOPEZ-CANTERA  
LT. GOVERNOR

JONATHAN P. STEVERSON  
SECRETARY

### PERMITTEE

Fernandina Beach Mill  
RockTenn CP, LLC  
600 North 8<sup>th</sup> Street  
Fernandina Beach, Florida 32034

Permit No. 0890003-046-AC  
Permit Expires: March 31, 2018

Fernandina Beach Mill  
Project: SO<sub>2</sub> Emissions Reduction Project  
Nassau County, Florida

### Authorized Representative:

Mr. Thomas Sweetser, General Manager

### PROJECT

This is the final air construction permit, which is for the Sulfur Dioxide (SO<sub>2</sub>) Emissions Reduction Project at the Fernandina Beach Mill. Specific physical and operational changes at the mill will be undertaken to reduce SO<sub>2</sub> emissions and ambient impacts.

RockTenn CP, LLC operates an existing Kraft Pulp Mill (SIC No. 2611) in Fernandina Beach at 8th Street North in Nassau County, Florida 32304. The UTM coordinates are zone 17, 456.2 kilometers (km) East, and 3394.2 km North. 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, power house and paper mill. A corrugated container plant is also located at the site.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit

### STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction requirements for major new source review in Chapter 62-212, F.A.C.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

David L. Read, P.E.

A handwritten signature in black ink that reads 'David L. Read'.

2015.01.09

13:26:44 -05'00'

for: Jeffery F. Koerner, Program Administrator  
Office of Permitting and Compliance  
Division of Air Resource Management

JFK/dlr

[www.dep.state.fl.us](http://www.dep.state.fl.us)

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this final air permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

- Mr. Thomas Sweetser, RockTenn: [tsweetser@rocktenn.com](mailto:tsweetser@rocktenn.com)
- Ms. Michele Rundlett, RockTenn, [mrundlett@rocktenn.com](mailto:mrundlett@rocktenn.com)
- Mr. Robert Fox, P.E., Environmental Resource Management: [bob.fox@erm.com](mailto:bob.fox@erm.com)
- Mr. Richard Rachal, DEP NED: [Richard.Rachal@dep.state.fl.us](mailto:Richard.Rachal@dep.state.fl.us)
- Ms. Heather Ceron, U.S. EPA Region 4: [ceron.heather@epa.gov](mailto:ceron.heather@epa.gov)
- Ms. Lorinda Shepherd, EPA Region 4: [shephard.lorinda@epa.gov](mailto:shephard.lorinda@epa.gov)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.



2015.01.09  
14:00:20 -05'00'

**SECTION 1. GENERAL INFORMATION**

**FACILITY DESCRIPTION**

This existing facility is a Kraft Pulp Mill (SIC No. 2611) in Fernandina Beach at 8th Street North in Nassau County, Florida 32304. 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, power house and paper mill. A corrugated container plant is also located at the site.

**PROPOSED PROJECT**

RockTenn CP, LLC will implement the physical and operational changes identified in the SO<sub>2</sub> Emissions Reduction Project to reduce SO<sub>2</sub> emissions and ambient impacts from the Mill. The SO<sub>2</sub> emissions standards specified in this permit are the basis for the SO<sub>2</sub> attainment demonstration in the State Implementation Plan (SIP). This existing facility consists of the emissions units (EU) shown in below. The emission units affected by this permitting action are highlighted in yellow.

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
006	No. 5 Power Boiler
007	No. 4 Recovery Boiler
011	No. 5 Recovery Boiler
013	No. 4 Smelt Dissolving Tank
014	No. 5 Smelt Dissolving Tank
015	No. 7 Power Boiler
020	Tall Oil Plant
021	No. 4 Lime Kiln
024	C-Line Brownstock Washer System
033	Pulping System MACT I
035	Wide-web Flexographic Printers
038	John Deere 210 BHP Diesel Engine- Model JU6H-UF50
039	Caterpillar 292 BHP Diesel Engine- Model 3406c
040	Caterpillar 292 BHP Diesel Engine - Model 3406c
041	Coal Handling System
042	John Deere, Diesel Engine (125 BHP) - Model 6466DF-00
043	Wisconsin, Diesel Engine (65 BHP) - Model V465D
<i>Unregulated Emissions Units and Activities</i>	
025	Wood yard
026	Brownstock Washing
028	Chemical Recovery Area
029	Converting Area/Warehouse
030	Facility-Wide miscellaneous
031	Secondary Fiber Pulp
032	Papermaking

RockTenn CP, LLC  
Fernandina Beach Mill

Permit No. 0890003-046-AC  
SO<sub>2</sub> Emissions Reduction Project

## SECTION 1. GENERAL INFORMATION

---

### FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate 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 62-213, 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.
- The facility operates units that are subject to the New Source Performance Standards (NSPS) at 40 Code of Federal Regulations, Part 60 (40 CFR 60), and the National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63.



## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The mailing address for the Office of Permitting and Compliance is 2600 Blairstone Road (MS #5505), Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Compliance Authority, the Department's Northeast District Office. The Compliance Authority's mailing address is:

Northeast District Office  
8800 Baymeadows Way West, Suite 100  
Jacksonville, FL 32256-7590  
Phone: (904) 256-1700  
Fax: (904) 256-1588

3. Appendices: The following Appendices are attached as a part of this permit and the permittee must comply with the requirements of the appendices:
  - a. Appendix A. Citation Formats and Glossary of Common Terms
  - b. Appendix B. General Conditions
  - c. Appendix C. Common Testing Requirements
  - d. Appendix D. Standard CEMS Requirements
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

### PREVIOUS APPLICABLE REQUIREMENTS

8. Effect on Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions, rules and regulations. [Rule 62-4.070(1) & (3), Reasonable Assurance, F.A.C.]

**SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS**

**A. No. 5 Power Boiler (EU No. 006)**

This subsection of the permit addresses the following emission unit:

EU No.	Brief Description
006	<p><u>No. 5 Power Boiler.</u> This power boiler primarily fires carbonaceous fuel and oil with a total maximum operational heat input rate of 805 MMBtu/hour.</p> <p>Particulate matter emissions are controlled by a multiple cyclone (without fly ash reinjection) followed by a single-chamber, three-field, electrostatic precipitator. The fly ash collected in the electrostatic precipitator is injected into one of the No. 7 Power Boiler coal pulverizers. The boiler bottom ash is transported to the wastewater treatment plant or off-site landfill.</p> <p>Low-volume, high-concentration non-condensable gases (NCGs) 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 in accordance with 40 CFR 63, Subpart S. The No. 5 Power Boiler currently serves as a backup NCGs control device.</p>

1. Authorized Fuels: Effective January 31, 2016, the No. 5 Power Boiler shall no longer fire No. 6 fuel oil. [Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
2. Operation as Backup NCGs Control Device for the No. 4 Lime Kiln: Effective December 1, 2017, the No. 5 Power Boiler is prohibited from use as a backup NCGs control device unless otherwise approved by the Division of Air Resource Management. As part of a request for approval, RockTenn shall submit an engineering analysis that provides reasonable assurance that the No. 5 Power Boiler can comply with the SO<sub>2</sub> emissions standard specified in **Specific Condition 3** of this subsection while combusting NCGs. The engineering analysis shall include pertinent operational and technical information including but not limited to: white liquor scrubber design details, design and actual total reduced sulfur (TRS) compounds removal efficiency of white liquor scrubber, expected and maximum TRS concentration in NCGs stream, restrictions on boiler fuels and firing rates when operating as a backup control device, etc. [Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
3. SO<sub>2</sub> Emissions Standard: Effective January 31, 2016 through November 30, 2017, SO<sub>2</sub> emissions from the No. 5 Power Boiler shall not exceed 15.0 lb/hour based on a 3-hour block average as determined by data collected from a continuous emissions monitoring system (CEMS), during all periods of operation except when operating as a backup control device firing NCGs. Effective December 1, 2017, SO<sub>2</sub> emissions from the No. 5 Power Boiler shall not exceed 15.0 lb/hour based on a 3-hour block average as determined by data collected from a CEMS during all periods of operation. The CEMS shall be measuring and recording in units of the SO<sub>2</sub> emissions standard by the first effective date for this new emissions standard. Compliance with this new emissions standard will ensure compliance with the SO<sub>2</sub> emissions standard established in Permit No. 0890003-018-AC, which resulted in an exemption from the requirements of Best Available Retrofit Technology (BART) pursuant to Rule 62-296.340, F.A.C.  
*{Permitting Note: This new emissions standard reduces SO<sub>2</sub> emissions and ambient impacts in and around the SO<sub>2</sub> non-attainment area in Nassau County.}*  
[Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
4. Emissions Reporting: Within one business day of occurrence, the permittee shall notify the Compliance Authority of any exceedance of the SO<sub>2</sub> emissions standard. Within 15 days of occurrence, the permittee shall submit a report to the Compliance Authority detailing the exceedance, identifying the likely cause, describing any corrective actions taken, and noting when the unit was returned to compliance. [Rules 62-4.070(3) and 62-4.130, F.A.C.; SO<sub>2</sub> Attainment SIP]
5. Other Requirements: For additional recordkeeping, reporting, and notification requirements, see Appendix B (General Conditions), Appendix C (Common Testing Requirements) and Appendix D (Standard CEMS Requirements). [Rules 62-4.070(3) and 62-4.130, F.A.C.]

RockTenn CP, LLC  
Fernandina Beach Mill

Permit No. 0890003-046-AC  
SO<sub>2</sub> Emissions Reduction Project

**SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS**

**B. No. 7 Power Boiler (EU No. 015)**

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
015	<p><u>No. 7 Power Boiler</u>: Firing coal, oil, and/or natural gas, this power boiler is capable of generating 825,000 pounds per hour of steam with a nominal temperature of 825 degrees Fahrenheit (°F) and a nominal pressure of 850 pounds per square inch gage (psig). Auxiliary equipment includes an economizer, fans and drives, air preheater, instrumentation, breaching and duct work, and related piping.</p> <p>Particulate matter emissions are controlled by a two-chamber, 6-field per chamber, electrostatic precipitator manufactured by Hamon Research-Cottrell.</p> <p>Low-volume, high-concentration NCGs 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 in accordance with 40 CFR 63, Subpart S. Upon completion of this project, the No. 7 Power Boiler will serve as the backup NCGs control device.</p>

1. SO<sub>2</sub> Emissions Standard: Effective January 31, 2016, SO<sub>2</sub> emissions from the No. 7 Power Boiler shall not exceed 1225.20 lb SO<sub>2</sub>/hour based on a 3-hour block average as determined by the current compliance demonstration methods in the Title V air operation permit (e.g., stack testing, fuel sulfur monitoring and fuel consumption monitoring). The new emissions standard applies at all times including periods of startup and shutdown. Effective December 1, 2017, SO<sub>2</sub> emissions from the No. 7 Power Boiler shall not exceed 1225.20 lb SO<sub>2</sub>/hour based on a 3-hour block average as determined by data collected from a certified CEMS. The new emissions standard applies at all times including periods of startup, shutdown, and the firing of NCGs. *{Permitting Note: This new emissions standard reduces SO<sub>2</sub> emissions and ambient impacts in and around the SO<sub>2</sub> non-attainment area in Nassau County.}*  
[Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
2. Primary NCGs Backup Control Device: Effective December 1, 2017, the No. 7 Power Boiler will be used as the primary backup NCGs control device for the No. 4 Lime Kiln to ensure compliance with 40 CFR 63, Subpart S - National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. The following associated work is authorized.
  - a. Piping System. The permittee shall install, operate and maintain a NCGs piping system to transport NCGs for combustion in the No. 7 Power Boiler comprised of piping and related equipment. Based on the preliminary design, the new piping system will tie into the existing NCGs line downstream of the existing steam ejector and just upstream of the existing entrainment separator at the No. Power Boiler and shall use similar equipment and safety interlocks as those currently in place at the No. 5 Power Boiler. All work on the NCGs piping system shall be complete by December 1, 2017. By December 30, 2017, the permittee shall submit the final design details of the new piping system (as installed) including a schematic of the interconnections of from existing NCG piping system to the scrubber and combustion units. [Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
  - b. White Liquor Scrubber System. Upstream of the introduction of NCGs to the No 7 Power Boiler, the permittee shall install, operate and maintain a white liquor scrubber system to remove TRS compounds from the NCGs stream before combustion in the No. 7 Power Boiler. The preliminary design of the white liquor scrubber includes a counter-flow, spray tower with the white liquor sprayed into the top of scrubber vessel using nozzles and the NCG stream entering the bottom of the vessel and flowing up across the packing material. The preliminary scrubber location is near the lime kiln, next to the existing NCGs condenser. The white liquor scrubber shall be designed to remove at least 50% of the TRS based on the design TRS concentration. The white liquor scrubber shall be designed as a closed system that does not exhaust to the atmosphere. All work on the white liquor scrubber system shall be complete by December 1, 2017. By December 30, 2017, the permittee shall submit the final design details of the new scrubber

RockTenn CP, LLC  
Fernandina Beach Mill

Permit No. 0890003-046-AC  
SO<sub>2</sub> Emissions Reduction Project

**SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS**

---

**B. No. 7 Power Boiler (EU No. 015)**

system (as installed) including specific design details (e.g., scrubber liquor flow, spray nozzle arrangement, NCG exhaust flow, TRS concentration, pH levels, etc.). [Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]

3. SO<sub>2</sub> CEMS Required for Demonstrating Compliance. The permittee shall install, calibrate, maintain and operate a CEMS to measure and record SO<sub>2</sub> emissions and exhaust flow for reporting in units of the applicable standard. Emissions shall be monitored and recorded during all periods of boiler operation including startup, shutdown and malfunction. The permittee shall install and operate the CEMS in accordance with the applicable performance specifications, quality assurance procedures, and quality control requirements summarized in Appendix D (Standard CEMS Requirements) of this permit. The CEMS shall be installed, certified and recording valid data in units of the SO<sub>2</sub> emissions standard prior to the No. 7 Power Boiler being connected to the NCG piping for use as a backup control device, but no later than December 1, 2017.

*{Permitting Note: This specific condition replaces the SO<sub>2</sub> annual stack testing requirements for No. 7 Power Boiler specified in Construction Permit No. AC45-35532; PSD-FL-062; and Construction Permit No. 0890003-019-AC/ PSD-FL-062B with and SO<sub>2</sub> CEMS to show compliance with the SO<sub>2</sub> emission limits.}*

[Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]

4. Emissions Reporting: Within one business day of occurrence, the permittee shall notify the Compliance Authority of any exceedance of the SO<sub>2</sub> emissions standard. Within 15 days of occurrence, the permittee shall submit a report to the Compliance Authority detailing the exceedance, identifying the likely cause, describing any corrective actions taken, and noting when the unit was returned to compliance. [Rules 62-4.070(3) and 62-4.130, F.A.C.; SO<sub>2</sub> Attainment SIP]
5. Other Requirements: For additional recordkeeping, reporting, and notification requirements, see Appendix B (General Conditions), Appendix C (Common Testing Requirements) and Appendix D (Standard CEMS Requirements). [Rules 62-4.070(3) and 62-4.130, F.A.C.]

**SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS**

**C. Nos. 4 and 5 Recovery Boilers (EU Nos. 007 and 011)**

The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
007	<u>No. 4 Recovery Boiler</u> : This recovery boiler is a Babcock & Wilcox low-odor design boiler with a total maximum operational rate of 137,500 lb/hour of black liquor solids. The boiler is capable of generating 492,000 lb/hour of high-pressure process steam. Particulate matter emissions are controlled by an electrostatic precipitator.
011	<u>No. 5 Recovery Boiler</u> : This recovery boiler is a low-odor design boiler with a total maximum operation rate of 156,780 lb/hour of black liquor solids. The boiler is capable of generating 495,700 lb/hour of high-pressure process steam. Particulate matter emissions are controlled from the North and South stacks by an electrostatic precipitator. The furnace recovers chemicals from Kraft spent liquor (straight mode) and neutral sulfite semi-chemical process liquor (cross mode).

1. Recovery Boiler Upgrades. The permittee shall make the necessary physical improvements to each recovery boiler necessary to achieve a more stable and consistent combustion and chemical recovery process within each unit. The preliminary plans include some or all of the following: adding liquor heaters to raise the as-fired solids content, installing a heavy liquor tank to provide uniform operations, combustion air system improvements, combustion control system upgrades, concentrator pump and associated piping changes, and pump and piping upgrades necessary to fire No. 2 fuel oil. The preliminary design includes plans for a comprehensive, fully integrated air system based on combustion modeling and an upgraded two- or three-level combustion air system. Upgrades on at least one recovery boiler (Nos. 4 and/or 5) shall be complete no later than December 1, 2016. Upgrades on the remaining unit (No. 4 or No. 5) shall be complete no later than December 1, 2017. By December 30, 2016 and December 30, 2017, the permittee shall submit final design details for the newly upgraded recovery boiler to include a description of how the systems will be operated to the Compliance Authority and the Division of Air Resource Management. [Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
  
2. SO<sub>2</sub> Emission Standard. Effective January 1, 2018, SO<sub>2</sub> emissions from each recovery boiler shall not exceed 150.0 lb/hour based on a 3-hour block average as determined by data collected from a certified CEMS or other methods approved by the Division of Air Resource Management. Alternatively, the permittee may elect to comply with the following combined SO<sub>2</sub> emissions cap: Effective January 1, 2018, combined SO<sub>2</sub> emissions from the Nos. 4 and 5 recovery boilers shall not exceed 300.0 lb/hour based on a 3-hour block average as determined by data collected from a certified CEMS. Note that compliance with the combined SO<sub>2</sub> emissions cap must be demonstrated by certified CEMS data.  
  
*{Permitting Note: This new emissions standard reduces SO<sub>2</sub> emissions and ambient impacts in and around the SO<sub>2</sub> non-attainment area in Nassau County.}*  
  
[Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]
  
3. SO<sub>2</sub> Compliance Demonstration.
  - a. SO<sub>2</sub> CEMS. Unless otherwise approved by the Division of Air Resource Management, compliance with the SO<sub>2</sub> emissions standard shall be demonstrated by data collected from a certified CEMS. The permittee shall install, calibrate, maintain and operate a CEMS on each recovery boiler to measure and record SO<sub>2</sub> emissions and exhaust flow for reporting in units of the applicable standard. Emissions shall be monitored and recorded during all periods of recovery boiler operation including startup, shutdown and malfunction. The permittee shall install and operate the CEMS in accordance with the applicable performance specifications, quality assurance procedures, and quality control requirements summarized in

### SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS

#### C. Nos. 4 and 5 Recovery Boilers (EU Nos. 007 and 011)

Appendix D (Standard CEMS Requirements) of this permit. If the permittee elects the combined SO<sub>2</sub> emissions cap, compliance must be demonstrated with CEMS data. The CEMS shall be measuring and recording valid data in units of the SO<sub>2</sub> emissions standard by January 1, 2018.

- b. *Periodic Emissions Testing Plus Parametric Monitoring*: The permittee may elect to complete the physical improvements to the combustion air systems early. This would allow time to conduct engineering tests to gather critical SO<sub>2</sub> emissions data, fuel firing data, and other operational data to establish the SO<sub>2</sub> emissions profile for each unit to identify key parameters that ensure a stable combustion and recovery process. If able to identify a strong relationship between SO<sub>2</sub> emissions and key operating parameters, the permittee may request approval of a combination of periodic compliance testing (e.g., quarterly stack tests that collect 24-hours of continuous data) plus continuous parametric monitoring as an alternative to the installation and operation of a certified CEMS.

[Rules 62-4.070(3) and 62-4.080, F.A.C.; SO<sub>2</sub> Attainment SIP]

4. Emissions Reporting: Within one business day of occurrence, the permittee shall notify the Compliance Authority of any exceedance of the SO<sub>2</sub> emissions standard. Within 15 days of occurrence, the permittee shall submit a report to the Compliance Authority detailing the exceedance, identifying the likely cause, describing any corrective actions taken, and noting when the unit was returned to compliance. [Rules 62-4.070(3) and 62-4.130, F.A.C.; SO<sub>2</sub> Attainment SIP]
5. Other Requirements: For additional recordkeeping, reporting, and notification requirements, see Appendix B (General Conditions), Appendix C (Common Testing Requirements) and Appendix D (Standard CEMS Requirements). [Rules 62-4.070(3) and 62-4.130, F.A.C.]

## Appendix C – Nassau County NAA SIP Air Quality Modeling Demonstration

### 4. Air Quality Modeling Demonstration

#### 4.1 Model Selection and Control Options

The AERMOD modeling system (including the terrain processor, AERMAP, and the meteorological data processor, AERMET) was used to analyze the impact of the modified facilities on the ambient SO<sub>2</sub> concentrations in the nonattainment area. Federally enforceable permit emission limits were used as model inputs. The modeling demonstration utilized the most current versions of the AERMOD models available at the time the modeling demonstration was performed. The model versions used are listed below in **Table 6**.

**Table 6**

<b>Model Versions Used in the SO<sub>2</sub> Air Quality Modeling Attainment Demonstration</b>	
<b>Model</b>	<b>Version</b>
AERMOD	14134
AERMET	14134
AERMAP	11103

A series of specific model features in AERMOD recommended by EPA, referred to as the regulatory options, were used in the modeling analysis.

#### 4.2 Modeled Sources

This air quality modeling demonstration includes all SO<sub>2</sub>-emitting sources for the Rayonier facility as well as the RockTenn facility, the only significant sources of SO<sub>2</sub> emissions within 25 km of the nonattainment area (**Figure 1**). A number of other sources in the area were considered for inclusion but were determined to not have a significant contribution to SO<sub>2</sub> levels in the nonattainment area based on monitoring data. These sources are accounted for in the added background concentration. Stack parameters and other source characteristics for Rayonier and RockTenn were obtained from the construction permits. **Table 7** and **Table 8** summarize the source parameters and SO<sub>2</sub> emission rates for all modeled point sources at the Rayonier and RockTenn facilities.

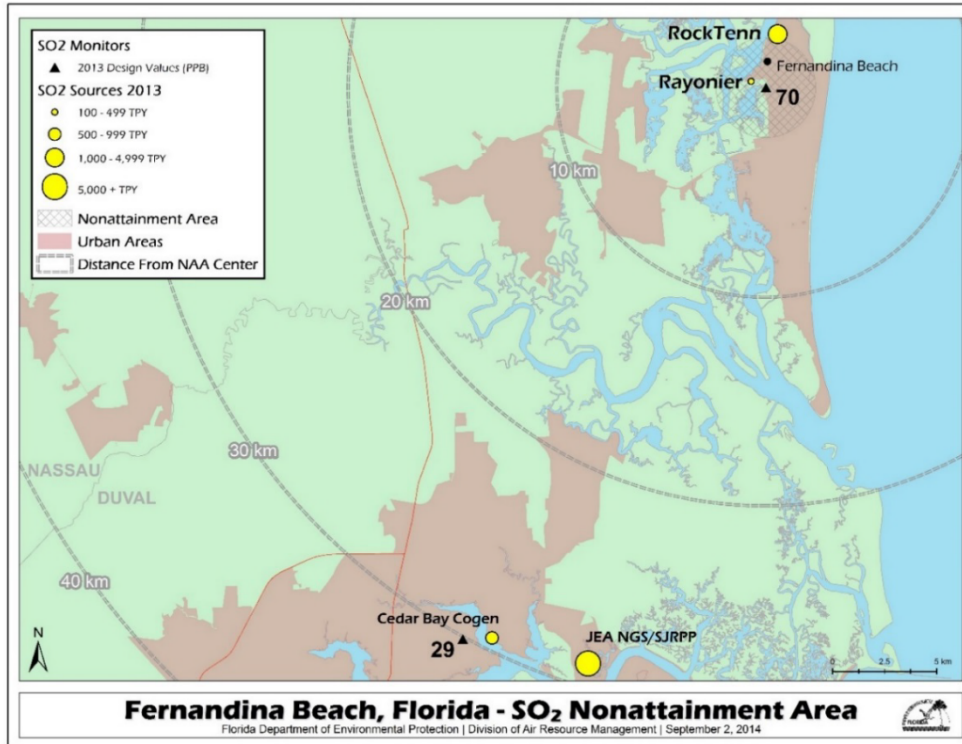


Figure 1. Nassau County, Florida SO<sub>2</sub> Nonattainment Area

Table 7

Fernandina Beach SO <sub>2</sub> Attainment Demonstration – Modeled SO <sub>2</sub> Emission Rates						
Source ID	Type	Company	Description	EU ID	Modeled Emission Rate	
					grams/second	pounds/hour
RAYVGS	Point	Rayonier	Vent Gas Scrubber	5	4.99	39.62
RAYRECB	Point	Rayonier	Sulfite Recovery Boiler	6	38.26	303.68
RAY6	Point	Rayonier	No. 6 Power Boiler	22	24.05	190.88
RTN6	Point	RockTenn	No. 5 Power Boiler	6	2.04	16.20
RTN15	Point	RockTenn	No.7 Power Boiler	15	156.09	1238.85
RTN7	Point	RockTenn	No. 4 Recovery Boiler	7	18.98	150.60
RTN11S	Point	RockTenn	No. 5 Recovery Boiler South Stack	11	9.47	75.15
RTN11N	Point	RockTenn	No. 5 Recovery Boiler North Stack	11	9.47	75.15
RTN21	Point	RockTenn	No. 4 Lime Kiln	21	2.65	21.00
4SDT	Point	RockTenn	No. 4 Smelt Dissolving Tank	13	0.13	1.03
5SDT	Point	RockTenn	No. 5 Smelt Dissolving Tank	14	0.15	1.18



**Table 8**

<b>Fernandina Beach SO<sub>2</sub> Attainment Demonstration – Modeled Source Parameters</b>														
Source	Coordinates		Base Elevation		Flowrate		Diameter		Exit Velocity		Temperature		Stack Height	
	UTM <sub>x</sub> (m)	UTM <sub>y</sub> (m)	(ft)	(m)	(ft <sup>3</sup> /min)	(m <sup>3</sup> /sec)	(in)	(m)	(ft/sec)	(m/sec)	(F)	(K)	(ft)	(m)
RAYVGS	454,896.18	3,392,372.58	7.55	2.30	28,331.54	13.37	60.00	1.52	24.05	7.33	122.09	323.20	180.00	54.86
RAYRECB	454,709.49	3,392,187.40	9.32	2.84	144,004.78	67.89	88.00	2.23	56.82	17.32	113.99	318.70	250.00	76.20
RAY6	454,998.57	3,392,492.97	12.47	3.80	256,955.08	121.27	120.00	3.05	54.53	16.62	286.97	414.80	190.00	57.91
RTN6	456,293.23	3,394,423.21	12.99	3.96	238,739.02	112.70	114.00	2.90	56.14	17.11	427.73	493.00	260.00	79.25
RTN15	456,256.65	3,394,391.51	13.32	4.06	384,610.11	181.48	156.00	3.96	48.29	14.72	397.13	476.00	342.65	104.44
RTN7	456,320.64	3,394,493.25	14.67	4.47	314,878.19	148.59	138.00	3.51	50.52	15.40	442.13	501.00	250.33	76.30
RTN11S	456,430.12	3,394,501.18	15.85	4.83	190,350.84	89.82	108.00	2.74	49.87	15.20	431.33	495.00	288.65	87.98
RTN11N	456,441.28	3,394,514.19	15.85	4.83	190,350.84	89.82	108.00	2.74	49.87	15.20	431.33	495.00	288.65	87.98
RTN21	456,547.48	3,394,530.29	12.63	3.85	88,898.42	41.96	60.00	1.52	75.46	23.00	379.13	466.00	100.49	30.63
4SDT	456,320.58	3,394,479.65	14.67	4.47	37,569.24	17.73	72.00	1.83	22.15	6.75	164.93	347.00	249.00	75.90
5SDT	456,424.65	3,394,499.68	15.85	4.83	32,652.78	15.41	48.00	1.22	43.31	13.20	168.53	349.00	288.16	87.83

**4.3 Modeled Emission Rate Averaging Times**

If a compliance averaging time for a SIP emission limit is longer than the averaging time for the applicable NAAQS (here, one hour), EPA guidance provides a method of calculating an “equivalent” longer-term emission limit where appropriate.<sup>5</sup> The method involves finding the “critical emission value” – the emission rate at which the model would predict ambient SO<sub>2</sub> concentrations at the level of the one-hour SO<sub>2</sub> NAAQS – then adjusting this rate downward so as to achieve a comparable stringency to the modeled one-hour average emission limit. The premise of this approach is that a lower limit will sufficiently constrain the frequency and magnitude of occasional high emission rates within the chosen longer-term averaging period. The adjustment method suggested by EPA is to scale the longer-term average emission limit by the ratio of each source’s historic 99<sup>th</sup> percentile one-hour average emission rate to its 99<sup>th</sup> percentile longer-term average emission rate. Further, the guidance states that “. . . if the new emission limit requires more stringent emission control than is currently in place at a source, the analyses should be designed, to the extent practicable, to reflect the hourly emissions variability that can be expected once the emission limit is in place.” With specific regard to RockTenn’s Recovery Boilers No. 4 and No. 5, compliance with the new emissions limits will require the exclusive use of ultra-low sulfur diesel (ULSD), with a maximum sulfur content of 15 parts per million (0.0015 percent), as a fuel oil. The facility is allowed by permit to burn ULSD, and the use of ULSD was used in determining the critical emissions values for Recovery Boilers No. 4 and No. 5.<sup>6</sup>

This analysis along with an overall analysis of each unit’s emissions variability was completed for both facilities and is summarized in **Table 9**. Based on this analysis, consistent with EPA’s Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions, DEP has adjusted both

<sup>5</sup> Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. <http://www.epa.gov/ttn/oarpg/t1pgm.html>

<sup>6</sup> As noted in the “Materials to be Incorporated into the SIP” section of this submittal, effective January 1, 2018, fuel oil usage at Recovery Boilers No. 4 and No. 5 will be limited to ULSD.

Rayonier's and RockTenn's 1-hour modeled emission rates in **Table 7** down to the "equivalent" longer-term compliance average emission limits given in **Table 4** and **Table 5**. For reference, **Table 10** provides a summary of this adjustment calculation.

**Table 9**

Source Emission Rate Variability Analysis				
Company	Source	99 <sup>th</sup> Percentile Rate (grams/sec)		Ratio 3-Hr/1-Hr
		1-Hr Average	3-Hr Average	
Rayonier	Vent Gas Scrubber*	3.56	2.27	0.639
Rayonier	Sulfite Recovery Boiler*	37.17	36.36	0.978
Rayonier	No. 6 Power Boiler*	6.96	6.56	0.943
RockTenn	No. 5 Power Boiler <sup>^</sup>	55.07	51.00	0.926
RockTenn	No. 7 Power Boiler <sup>`</sup>	106.83	105.64	0.989
RockTenn	No. 4 Recovery Boiler <sup>`</sup>	1.99	1.99	0.999
RockTenn	No. 5 Recovery Boiler <sup>`</sup>	2.06	2.05	0.998

\*Calculations based on CEMS data from 1/1/2010 – 12/31/2012.  
<sup>^</sup>Calculations based on CEMS data from 1/1/2010 – 10/14/2013.  
<sup>`</sup>Calculations based on calculated emission rates from 1/1/2010 – 10/14/2013.  
 See Appendix B

**Table 10**

Derivation of Compliance Emission Limits					
Source	Modeled Emissions Rate (lb/hr)	Averaging Time Adjustment Factor	Based on:	Compliance (Permitted ) Limit (lb/hr)	Averaging Time
Rayonier					
Vent Gas Scrubber	39.62	0.639	hourly CEMS	25.3	3-hour
Sulfite Recovery Boiler	303.68	0.978	hourly CEMS	297	3-hour
No. 6 Power Boiler	190.88	0.943	hourly CEMS	180	3-hour
Rock Tenn					
No. 5 Power Boiler	16.2	0.926	hourly CEMS	15	3-hour
No. 7 Power Boiler	1238.85	0.989	hourly fuel use and emis. Factor	1225.25	3-hour
No. 4 Recovery Boiler	150.6	0.999	hourly fuel use and emis. Factor	150	3-hour
No. 5 Recovery Boiler	150.3	0.998	hourly fuel use and emis. Factor	150	3-hour
2-unit cap	300.9	0.997	hourly fuel use and emis. Factor	300	3-hour

Note: Compliance emission limits are less than or equal to the modeled rate x adjustment factor.

#### 4.4 Meteorological Data Selection

The AERMET meteorological data used for this analysis consisted of a continuous five-year period of hourly surface weather observations and twice-daily upper air soundings from the Jacksonville National Weather Service Office at Jacksonville International Airport; the nearest surface weather observing station with a complete five-year dataset.<sup>7</sup> The five-year period of meteorological data was from 2008 through 2012. This meteorological data set was compiled by

<sup>7</sup> Although there are some meteorological data available from a location in Fernandina Beach, DEP elected not to utilize these data in its analysis for a number of reasons. Data prior to 2011 are not available from this location, and one-minute data are not available. The Jacksonville International airport data are the only complete available data representative of the Fernandina Beach area.

DEP and processed using AERMINUTE in order to reduce the number of calms and missing winds in the surface data. EPA has established criteria for the use of meteorological data for modeling purposes that states that meteorological data should be 90% complete on a quarterly basis before any substitutions are made.<sup>8</sup> The 2008-2012 dataset satisfies the 90% completeness requirement.

#### 4.5 Surface Characteristics

Prior to running AERMET, it is necessary to specify the surface characteristics of the location being modeled. For this task, DEP used the AERMET preprocessor AERSURFACE. AERSURFACE utilized the 1992 National Land Cover Dataset (NLCD) for Florida to extract surface characteristics for a one-kilometer radius area around both the Jacksonville International Airport and the nonattainment area. Surface characteristics were computed monthly and surface roughness was varied over 12 sectors. The resulting average surface characteristics are summarized in **Table 11**. The values at both sites are very similar. In addition, the airport is just 28 kilometers southwest of the nonattainment area, the land in between is generally flat, and both areas have similar rural topography. Based on this analysis, the Jacksonville International Airport surface dataset was considered to be representative of the domain for this modeling demonstration.

**Table 11**

Average Surface Characteristics Computed by AERSURFACE			
Location	Albedo	Bowen Ratio	Surface Roughness ( $z_0$ )
Jacksonville International Airport	0.14	0.44	0.058
Fernandina Beach SO <sub>2</sub> Nonattainment Area	0.13	0.21	0.321

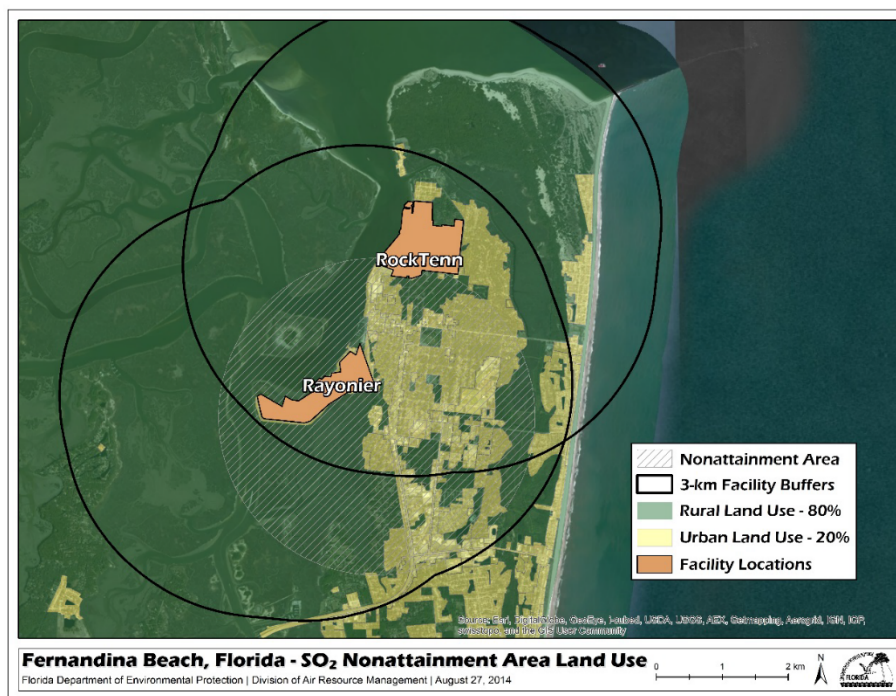
#### 4.6 Land Use Classification

Land-use classification was determined using Auer's<sup>9</sup> method and confirmed with population density data. The Auer method requires an analysis of the land use within a three-kilometer radius around a facility to determine if the majority of the land can be classified as either rural or urban. If more than fifty percent of the area consists of Auer land-use industrial, commercial, or residential land types, then urban dispersion coefficients are used in modeling; otherwise, rural dispersion coefficients are used. As shown in **Figure 2** below, rural land use constitutes a majority (80%) of the combined three-kilometer radii around each facility. According to the U.S. Census Bureau, the population density of the city of Fernandina Beach was approximately 408 people/km<sup>2</sup> in 2013 which is below the EPA suggested urban threshold of 750 people/km<sup>2</sup>. Based on this analysis, the rural dispersion coefficients were used in AERMOD.<sup>10</sup>

<sup>8</sup> Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, EPA-454/R-99-005, *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, (February 2000).

<sup>9</sup> Auer, Jr., A.H. "Correlation of Land Use and Cover with Meteorological Anomalies". *Journal of Applied Meteorology*, 17:636-643, 1978.

<sup>10</sup> State & County QuickFacts, United States Census Bureau.  
<http://quickfacts.census.gov/qfd/states/12/1222175.html>



**Figure 2.** Nassau County, Florida – SO<sub>2</sub> Nonattainment Area Land Use

#### 4.7 Terrain Data

Terrain elevations were incorporated into the modeling using AERMAP. For this modeling exercise, terrain data were extracted from National Elevation Dataset (NED) GeoTIFF files with a 1/3 arcsecond (~10m) grid spacing that were produced by the United States Geological Survey (USGS).

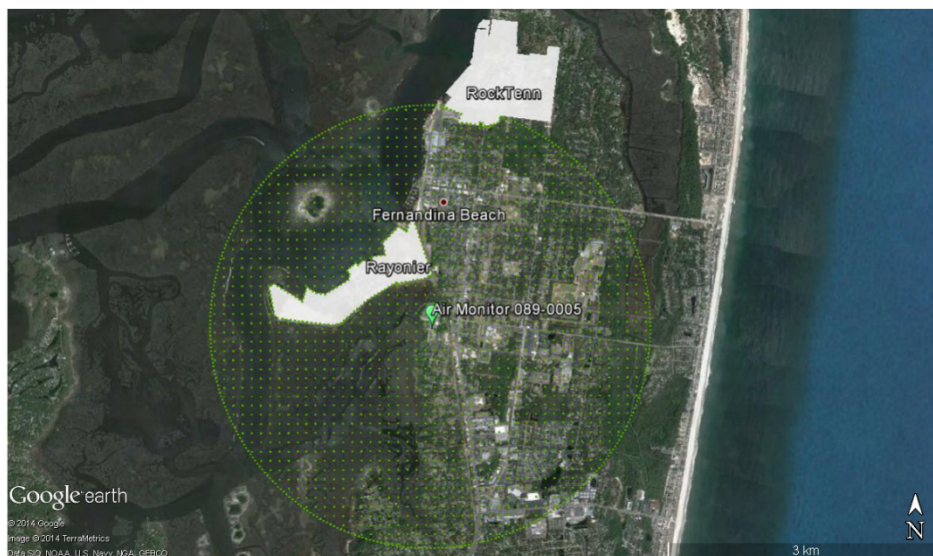
#### 4.8 Building Downwash

For this air quality modeling demonstration, the EPA-approved Plume Rise Model Enhancements (PRIME) algorithm was utilized to determine the direction-specific building downwash parameters. Concentrations were predicted in both the near and far wake regions, with the plume mass captured by the near wake treated separately from the uncaptured primary plume, and reemitted to the far wake as a volume source. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with the project all satisfied the GEP stack height criteria. Modeled building parameters are available upon request.

#### 4.9 Receptor Grid

A discrete Cartesian grid of 2,329 receptors with 100 meter spacing (50 meters along property boundaries) was used. The grid encompasses the entire nonattainment area, except facility

property, extending up to 2.4 kilometers away from the nonattainment monitor in all directions as depicted in **Figure 3**. The RockTenn facility property boundary is completely fenced on the north, south, and east sides, and is bounded on the west by a secured frontage on the Amelia River, precluding the general public from accessing the facility. The Rayonier facility property boundary is comprised of fencing and natural barriers such as wetlands and dikes that preclude public access. A large area of adjacent Rayonier-owned property to the south of the facility was modeled as ambient air due to a lack of physical boundaries to prevent public access to the property.



**Figure 3.** Nassau County, Florida Nonattainment Area Receptor Grid

#### 4.10 Background Concentration

A set of background concentrations to account for all SO<sub>2</sub> sources not explicitly modeled was developed for each hour of the day by season from local monitoring data. The procedure followed is outlined in EPA's SO<sub>2</sub> National Ambient Air Quality Standards Designations Modeling Technical Assistance Document.<sup>11</sup> The data used were obtained from the Florida Air Monitoring and Assessment System (FAMAS) from monitoring station No. 12-089-0005 for the period January 2012 to December 2013. Due to a significant, multi-year decline in monitored SO<sub>2</sub> concentrations at this site – illustrated in **Table 12** – only the most recent two years of data were used rather than the recommended three years.

<sup>11</sup> SO<sub>2</sub> National Ambient Air Quality Standards Designations Modeling Technical Assistance Document. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. <http://epa.gov/airquality/sulfurdioxide/pdfs/SO2ModelingTAD.pdf>

Table 12

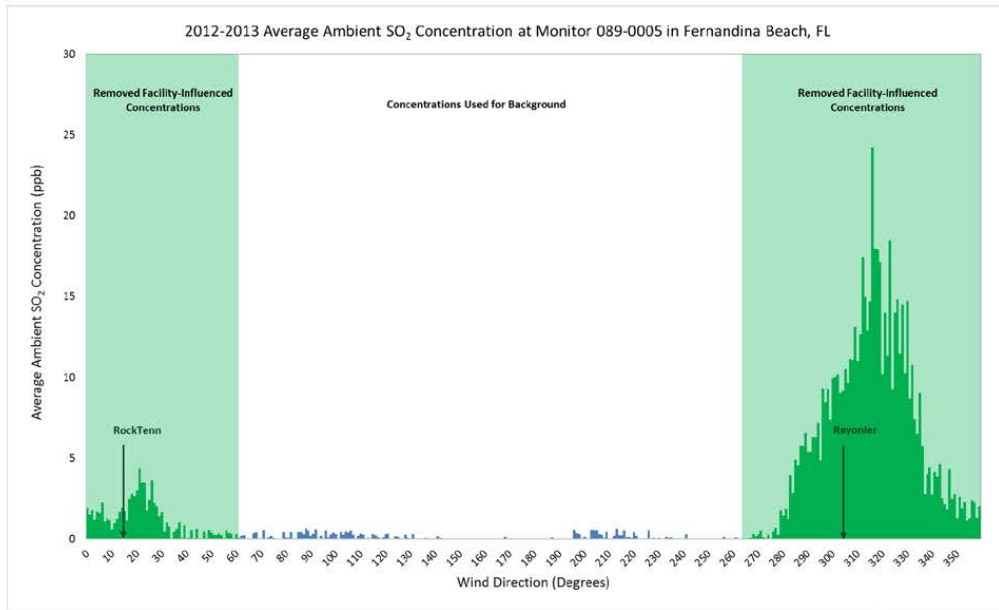
2003 – 2014 Monitored SO <sub>2</sub> Design Values for Monitor ID: 12-089-0005-42401-1																
Year	Ranked 1-hr Averages				Ranked 3-hr Averages				Ranked 24-hr Averages				Annual Average	99 <sup>th</sup> Percentile		Design Value
	1 <sup>st</sup>		2 <sup>nd</sup>		1 <sup>st</sup>		2 <sup>nd</sup>		1 <sup>st</sup>		2 <sup>nd</sup>			Complete	Valid	
2003	204	(04/22)	150	(05/12)	171	(04/22:21)	137	(05/12:21)	42	(04/22)	30	(05/12)	3.3	115	115	135
2004	103	(04/27)	97	(04/04)	75	(04/04:18)	67	(03/17:09)	30	(03/17)	30	(04/01)	3.0*	91*	91*	128*
2005	173	(04/13)	132	(02/12)	90	(04/13:18)	73	(02/12:00)	41	(09/13)	34	(02/11)	3.9*	98*	98*	101*
2006	278	(03/03)	273	(03/25)	157	(03/25:18)	149	(03/03:15)	63	(03/03)	40	(03/23)	4.5	176	176	122
2007	203	(03/22)	101	(03/04)	102	(03/22:21)	60	(03/04:06)	28	(03/04)	27	(01/25)	3.9	82	82	119
2008	146	(12/12)	100	(01/13)	83	(12/12:18)	79	(01/13:21)	30	(01/14)	28	(01/01)	3.3*	98*	98*	119*
2009	145	(03/02)	121	(09/29)	52	(03/03:00)	49	(09/29:18)	22	(12/20)	21	(12/26)	2.2	73	73	84
2010	345	(01/12)	344	(02/13)	317	(02/13:18)	159	(02/16:03)	68	(02/13)	58	(02/16)	4.3	216	216	129
2011	194	(01/12)	100	(02/13)	80	(10/28:06)	74	(06/01:06)	31	(01/12)	24	(11/10)	3.4	97	97	129
2012	117	(01/03)	88	(01/18)	58	(01/18:21)	56	(01/03:06)	23	(10/28)	19	(01/03)	2.1	54	54	122
2013	76	(05/24)	70	(02/01)	64	(05/24:12)	58	(02/01:18)	20	(05/24)	14	(01/21)	0.9	60	60	70
2014	48	(06/28)	40	(01/22)	28	(01/22:00)	26	(01/12:03)	13	(03/30)	12	(01/22)	2.2*	36*	36*	50*

\* DEP anticipates that the complete design value for 2012-2014 will be available at the end of calendar year 2014.

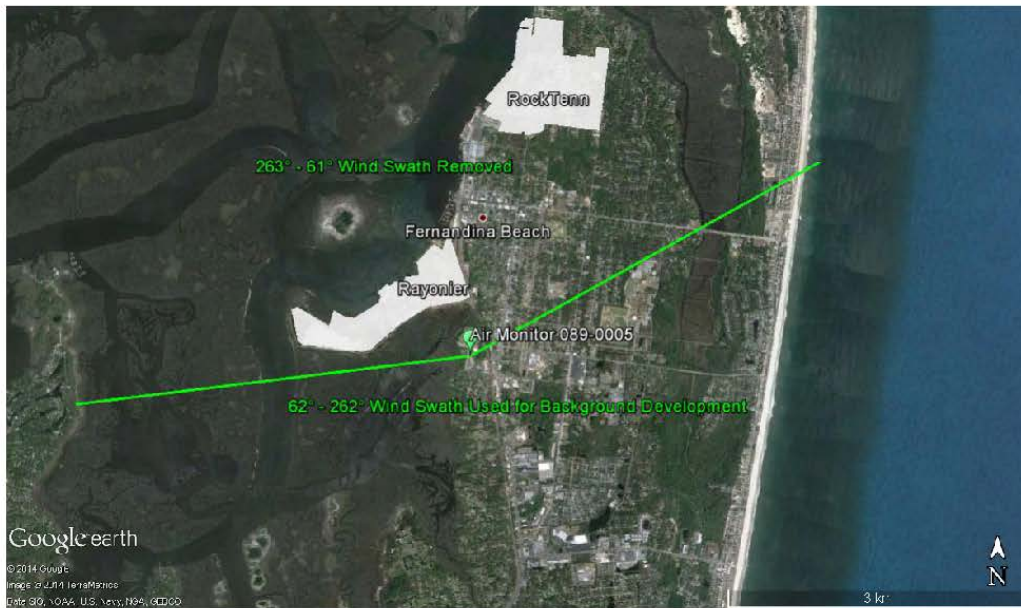
As shown in **Figure 3**, the monitor is approximately 0.9 km to the southeast of Rayonier and is also the nonattainment monitor. Due to its close proximity to the Rayonier facility, monitored concentrations at this station are strongly influenced by facility emissions as illustrated in **Figure 4**. The RockTenn facility is just 2.5 km to the north of the monitor and has a significant impact on recorded concentrations as well. As a result, the data were filtered to remove measurements where the wind direction could transport pollutants from either Rayonier or RockTenn to the station.<sup>12</sup> More specifically, the data were filtered to remove measurements where the hourly wind direction was in the range of 263° to 61° as shown in **Figure 5**. The 99<sup>th</sup> percentile concentration for each hour by season was then averaged across the two years and the resulting array was input to AERMOD with the BACKGRND SEASHR keyword. The final set of background concentrations is summarized in **Table 13**.

<sup>12</sup> This is a common practice used for developing background concentrations. Details of the procedures are outlined in 40 CFR Part 51 Appendix W – EPA’s *Guideline on Air Quality Models*.





**Figure 4.** 2012-2013 Average Ambient SO<sub>2</sub> Concentration by Wind Direction at Monitor 089-005 in Fernandina Beach, Florida



**Figure 5.** Data filtered to remove measurements where the hourly wind direction was in the range of 263° to 61°.

**Table 13**

<b>SO<sub>2</sub> Background Concentrations by Hour-of-Day by Season for Monitor 089-0005 (ppb)</b>									
Hour	Winter	Spring	Summer	Fall	Hour	Winter	Spring	Summer	Fall
0:00	2.0	1.0	2.0	4.5	12:00	4.0	3.0	3.0	3.0
1:00	2.0	1.0	1.0	3.5	13:00	3.0	3.0	2.0	2.0
2:00	3.0	1.0	1.5	2.5	14:00	2.5	3.5	2.0	2.5
3:00	2.5	1.0	1.5	1.5	15:00	2.5	2.0	2.0	2.5
4:00	2.5	1.0	1.5	2.5	16:00	2.0	1.5	2.5	2.5
5:00	2.0	1.5	2.5	4.5	17:00	1.0	1.0	1.5	3.0
6:00	3.0	1.5	2.0	4.0	18:00	2.0	2.0	3.0	2.5
7:00	2.0	1.5	3.0	4.5	19:00	1.0	1.5	1.5	2.5
8:00	2.0	1.5	3.5	5.0	20:00	1.0	1.5	1.0	1.5
9:00	4.0	2.0	7.5	4.5	21:00	2.0	1.0	1.0	3.0
10:00	4.5	4.0	6.0	4.5	22:00	1.0	1.0	1.0	3.5
11:00	6.0	2.5	6.0	4.5	23:00	1.5	1.5	3.0	2.5

**4.11 Summary of Modeling Results**

The EPA-recommended dispersion model AERMOD was used to evaluate the impact of the modified facilities on the ambient SO<sub>2</sub> values within the nonattainment area. The model was run from 2008-2012 and the 99th percentile (4th high) maximum daily one-hour average concentration for each year at each receptor was averaged across all five years.

As detailed previously, DEP established individual emission limits for most emission sources at Rayonier and RockTenn. However, a two-unit emissions cap was developed for RockTenn’s two recovery boilers in order to provide the facility with increased operational flexibility while simultaneously reducing SO<sub>2</sub> emissions from these two units. To ensure protection of the NAAQS, DEP identified the worst case scenario of emissions distributions from these two units by performing three distinct modeling scenarios: the entire emissions cap emitted from the No. 4 Recovery Boiler, the entire emissions cap emitted from the No. 5 Recovery Boiler, and the emissions cap distributed equally between the two units. Each of these scenarios was modeled with all other parameters remaining the same. The maximum predicted impact from each of the three model runs is summarized in **Table 14**.

**Table 14**

<b>Maximum Modeled SO<sub>2</sub> Impact in Nonattainment Area (µg/m<sup>3</sup>)</b>							
Model Scenario	Averaging Time	Max Predicted Impact		Background	Total Impact	SO <sub>2</sub> 1-Hour NAAQS	Greater Than NAAQS?
		Rayonier	RockTenn				
Unmodified	1-Hour	0.00*	2,957.80	4.19	2,961.99	196.4	Yes
Equal Cap Distribution	1-Hour	114.45	67.69	10.72	192.87	196.4	No
Entire Cap – No. 4 RB	1-Hour	110.93	71.56	9.16	191.65	196.4	No
Entire Cap – No. 5 RB	1-Hour	117.51	63.79	12.82	194.11	196.4	No

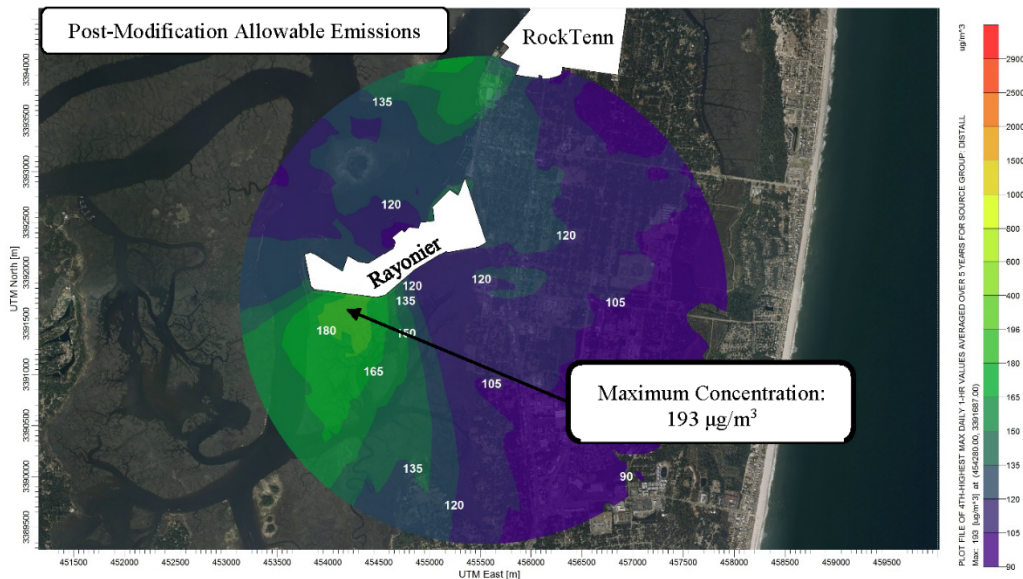
\*The area of maximum impact contains no contribution from Rayonier at the time of the predicted maximum impact.

Due to the close proximity of the RockTenn recovery boiler stacks and their distance from the nonattainment area, it was determined that modeled compliance is maintained regardless of the distribution of the emissions cap between these units. **Figure 6** presents the maximum of the



five-year average of 99<sup>th</sup> percentile maximum daily concentrations at each receptor in the nonattainment area for the equal cap distribution scenario – the scenario most representative of day-to-day operations. The area of highest concentration is found adjacent to the southwest corner of the Rayonier facility, on Rayonier-owned property, where emissions from sources at both facilities align. Under the scenario where the entire cap is shifted to the No. 5 Recovery Boiler, the area of maximum concentration occurs north of Rayonier near the RockTenn facility.<sup>13</sup>

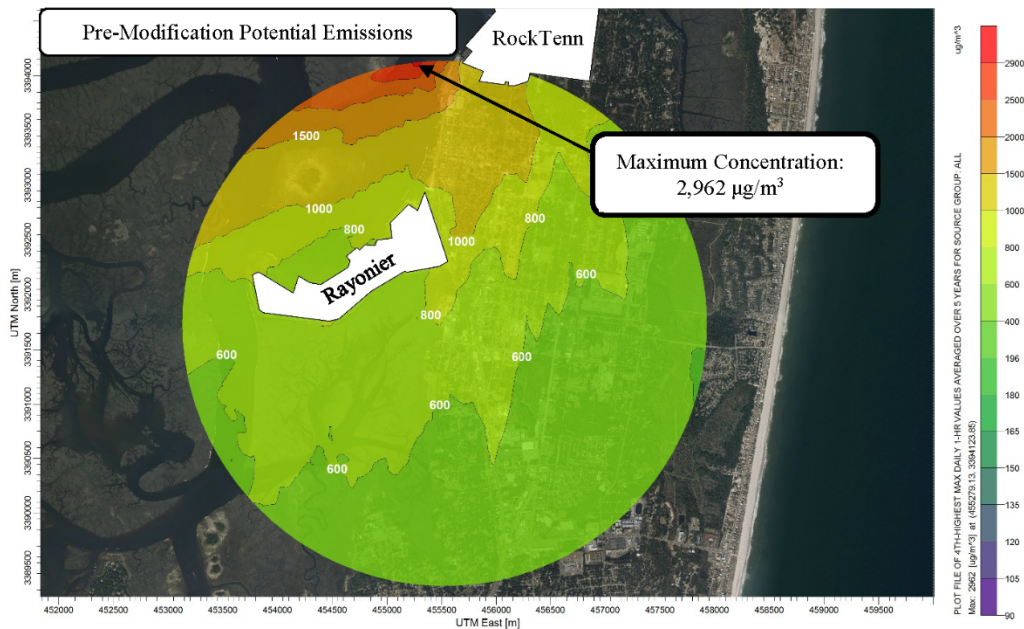
In accordance with EPA’s Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions, (April 2014), DEP modeled a suitable network of receptors representing the entire nonattainment area and included the sources both inside and outside the nonattainment area that were significant contributors to elevated SO<sub>2</sub> levels in the area.<sup>14</sup> As shown, the modeling results predict no violations of the revised SO<sub>2</sub> NAAQS within the nonattainment area. For comparison, **Figure 7** shows a plot of the pre-modification potential emissions in the area on the same scale as **Figure 6** indicating a decrease in modeled ambient SO<sub>2</sub> concentrations of more than 90%.



**Figure 6.** Post-Modification Modeling Maximum Allowable SO<sub>2</sub> Emissions

<sup>13</sup> A secondary maximum is located near the edge of the modeled area. DEP notes that EPA’s proposed Data Requirements Rule (79 FR 27446) sets forth a regulatory process to address modeled SO<sub>2</sub> concentrations outside of designated nonattainment areas.

<sup>14</sup> “The modeling for the attainment demonstration should include results for a suitable network of receptors representing the entire nonattainment area, and should exhibit modeling showing attainment of the NAAQS for the entire area by the statutory attainment date.” Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions (April 2014), Section V.C. Attainment Demonstration, p. 12. “The modeling domain should at a minimum encompass the nonattainment area and include the sources thought most likely to cause or contribute to NAAQS violations in and around the nonattainment area.” Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions (April 2014), Appendix A, Section 5. Modeling Domain, p. A-7.



**Figure 7.** Pre-Modification Modeling Maximum Allowable SO<sub>2</sub> Emissions

## 5. Conformity

CAA Section 176(c) requires that federal actions not cause or worsen air quality violations or delay attainment of a relevant NAAQS. This General Conformity Rule applies to any federal action within a nonattainment or maintenance area. Florida seeks through this SIP submittal approval of the state’s nonattainment area plan for Nassau County, in the form of federally-enforceable air permit conditions addressing SO<sub>2</sub> emissions from two facilities, as detailed above. EPA’s approval of this SIP will not cause or contribute to a violation of any NAAQS. On the contrary, EPA’s approval of this SIP will provide assurance that the Nassau County nonattainment area attains the standard as expeditiously as practicable.

## 6. Reasonable Further Progress

Reasonable further progress (RFP) generally applies to regional air pollutants that are emitted by numerous sources where the relationship between these sources and pollutant concentrations is indirect and/or poorly understood. EPA has stated that the RFP concept is less applicable to SO<sub>2</sub>, as SO<sub>2</sub> is a localized pollutant with limited sources.<sup>15</sup> Data from the reference monitor for the Nassau County nonattainment area already show that the area is in compliance with the revised SO<sub>2</sub> standard. As previously mentioned, Rayonier has completed its SO<sub>2</sub> reduction project, and RockTenn is on a strict compliance schedule, as detailed in the construction permit attached to this SIP revision, which will ensure continued attainment of the revised SO<sub>2</sub> standard. By

<sup>15</sup> SO<sub>2</sub> Guideline Document. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

## Appendix D – Attainment and Projected Emissions Inventory Development

The Nassau County SO<sub>2</sub> nonattainment area (NAA) attainment and projected emissions inventories consist of four source categories: Point, On-Road mobile, Area/Nonpoint, and Non-Road mobile. The data and methods used to estimate these source categories are described below for the creation of the attainment (2013) emissions inventory and projected future (2032, and four interim years in three-year increments) emissions inventories.

### 1. Point Sources

The only Point source of SO<sub>2</sub> in the NAA is the Rayonier facility which accounts for over 99% of the SO<sub>2</sub> emissions in the NAA. The emissions from Rayonier and the nearby WestRock facility were quantified using the facilities' Annual Operating Reports (AOR), which contain actual emissions measurements and calculations. These are summarized in **Table 1** and **Table 2** below.

**Table 1**

<b>Summary of SO<sub>2</sub> Emission Sources from Rayonier's 2013 AOR</b>		
Emission Unit Number	Unit Description	SO <sub>2</sub> EMISSIONS (tons)
EU005	Vent Gas Scrubber	14.84
EU006	Recovery Boiler	470.56
EU022	No. 6 Power Boiler	6.3
<b>Total 2011 Rayonier SO<sub>2</sub> Stack Emissions</b>		<b>491.70</b>

**Table 2**

<b>Summary of SO<sub>2</sub> Emission Sources from WestRock's 2013 AOR</b>		
Emission Unit Number	Unit Description	SO <sub>2</sub> EMISSIONS (tons)
EU006	No. 5 Power Boiler	60.29
EU007	No. 4 Recovery Boiler	134.32
EU011	No. 5 Recovery Boiler	128.91
EU013	No. 4 Smelt Dissolving Tank	1.45
EU014	No. 5 Smelt Dissolving Tank	1.37
EU015	No. 7 Power Boiler	2,793.45
EU021	No. 5 Lime Kiln	26.7
<b>Total 2011 WestRock SO<sub>2</sub> Stack Emissions</b>		<b>3,146.49</b>

The Department is not aware of and does not anticipate any future development within the NAA that would increase SO<sub>2</sub> emissions. Therefore, the 2032 inventory and each of the interim year inventories are identical to the 2013 inventory for Point sources.

### 2. On-Road Mobile Sources

The On-Road mobile source category was estimated by utilizing the most recent version of the Environmental Protection Agency's (EPA) Motor Vehicle Emission Simulator (MOVES), MOVES2014a. MOVES2014a is a state-of-the-science emission modeling system that estimates

emissions from mobile sources for criteria pollutants, greenhouse gases, and air toxics. The model was run for Nassau County for the 2013 attainment inventory, the 2032 projected emissions inventory, and the interim years 2020, 2023, 2026, and 2029.

The Nassau County results of the MOVES2014a model runs for each year were then apportioned to the NAA by using the fraction of the county land area contained within the boundaries of the NAA (13.75 km<sup>2</sup>/1673.5 km<sup>2</sup> or 0.82%). The MOVES2014a results are summarized in **Table 3**.

**Table 3**

<b>Summary of MOVES2014a Results for Nassau County SO<sub>2</sub> Emissions (tons)</b>						
<b>Year</b>	<b>2013</b>	<b>2020</b>	<b>2023</b>	<b>2026</b>	<b>2029</b>	<b>2032</b>
<b>County</b>	9.92	4.42	4.32	4.22	4.16	4.15
<b>NAA Apportionment</b>	0.11	0.05	0.05	0.05	0.04	0.04

### 3. Area/Nonpoint and Non-Road Sources

Given the small land area size of the NAA in Nassau County (just 13.75 km<sup>2</sup>), it is expected that there are very few emissions of SO<sub>2</sub> from Area/Nonpoint and Non-Road sources. For this reason, the 2011 final National Emissions Inventory (NEI) and the 2014 NEI Version 2, which EPA developed, is considered to be a reasonable basis for these categories. The NEI is a comprehensive and detailed estimate of air emissions of both criteria and hazardous air pollutants from all air emissions sources. The NEI is prepared every three years by the EPA based primarily upon emission estimates and emission model inputs provided by State, Local, and Tribal air agencies for sources in their jurisdictions, and supplemented by data developed by the EPA.

Estimates for the 2013 attainment inventory for these categories were calculated by interpolating between the NEI years of 2011 and 2014 to estimate emissions in 2013. Estimates for the projected future emissions inventories for these categories were calculated by multiplying the 2014 NEI data by the projected increase in population in Nassau County in each of these years. Population projections for 2032 and the interim years were developed by the Florida Bureau of Economic and Business Research.<sup>1</sup> For years where projections were not available, the projections were interpolated. Population data and projections are summarized in **Table 4**.

**Table 4**

<b>Nassau County Population Projections</b>					
<b>Year</b>	<b>2020</b>	<b>2023</b>	<b>2026</b>	<b>2029</b>	<b>2032</b>
<b>Nassau</b>	84,415	88,886	93,316	97,665	101,757

The county level emissions were again apportioned to the NAA using the fraction of the county land area within the boundaries of the NAA. A summary of the Nonpoint and Non-Road source emissions from the

<sup>1</sup> Population projections performed by: Florida Demographic Estimating Conference, February 2014 and the University of Florida, Bureau of Economic and Business Research, Florida Population Studies, Bulletin 168, April 2014. [http://edr.state.fl.us/Content/population-demographics/data/Medium\\_Projections.pdf](http://edr.state.fl.us/Content/population-demographics/data/Medium_Projections.pdf)

2011 NEI and the 2014 NEI are provided in **Table 5** below.

**Table 5**

<b>Details of SO<sub>2</sub> Area/Nonpoint and Non-Road Source Categories (tons)</b>								
<b>Description</b>	<b>Nassau County 2011</b>	<b>Nassau County 2014</b>	<b>2013 NAA (interp)</b>	<b>2020 NAA</b>	<b>2023 NAA</b>	<b>2026 NAA</b>	<b>2029 NAA</b>	<b>2032 NAA</b>
Fires - Agricultural Field Burning	1.85	0.25						
Miscellaneous Non-Industrial NEC	0.04	0.05						
Fuel Comb - Comm/Institutional - Biomass	0.01	0.04						
Fuel Comb - Comm/Institutional - Natural Gas	0.03	0.03						
Fuel Comb - Comm/Institutional - Oil	2.18	0.33						
Fuel Comb - Comm/Institutional - Other	0	0.01						
Fuel Comb - Industrial Boilers, ICEs – Biomass	4.56	0						
Fuel Comb - Industrial Boilers, ICEs – Natural Gas	0.02	0						
Fuel Comb - Industrial Boilers, ICEs – Oil	22.85	0.66						
Fuel Comb - Residential - Natural Gas	0.002	0.002						
Fuel Comb - Residential - Oil	0.24	0.05						
Fuel Comb - Residential - Other	0.04	0.02						
Fuel Comb - Residential - Wood	0.29	0.85						
Port and Underway Emissions	5.77	61.68						
Railroad Equipment	8.70	0.36						
Waste Disposal	1.95	11.68						
<b>Area/Nonpoint Totals</b>	<b>48.55</b>	<b>76.01</b>	<b>0.72</b>	<b>0.93</b>	<b>0.98</b>	<b>1.03</b>	<b>1.08</b>	<b>1.12</b>
Mobile - Non-Road Equipment - Diesel	0.75	0.53						
Mobile - Non-Road Equipment - Gasoline	0.30	0.32						
Mobile - Non-Road Equipment - Other	0.04	0.01						