

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



**SUPPLEMENT TO
FLORIDA REGIONAL HAZE PLAN FOR
THE SECOND IMPLEMENTATION PERIOD FOR
FLORIDA CLASS I AREAS**

Final Submittal

June 14, 2024

State of Florida
Department of Environmental Protection

**Supplement to Florida’s Regional Haze Plan
for the Second Implementation Period for
Florida Class I Areas**

Introduction

The Florida Department of Environmental Protection (Department) is proposing to supplement Florida’s pending Regional Haze Plan and proposed State Implementation Plan (SIP) Amendment under the federal Clean Air Act (CAA). Pursuant to the requirements of CAA sections 169A and 169B, and the U.S. Environmental Protection Agency’s (EPA) implementing regulations at 40 CFR 51.308, the Department has prepared this supplement to Florida’s pending Regional Haze Plan and proposed SIP Amendment for EPA’s approval. This proposed supplement to Florida’s pending Regional Haze Plan and proposed SIP revision addresses commitments and enforceable actions that the state did not include in its submittal dated October 8, 2021. Florida’s pending Regional Haze Plan and proposed SIP revision, together with this supplement, address all of the requirements of EPA’s Regional Haze regulations applicable to the second implementation period, from 2019 to 2028, towards the goal of attaining natural visibility conditions in Florida’s designated federal Class I areas.

SIP Submittal Package

On October 8, 2021, Florida submitted to EPA its Regional Haze Plan and associated proposed SIP revision for the second implementation period. This submittal included permits, technical analyses, and commitments addressing specific requirements of the applicable federal regulations.

This supplement to Florida’s pending Regional Haze Plan and SIP revision addresses the following elements that were not included in Florida’s October 8, 2021, submittal:

- A supplemental four-factor analysis for WestRock Fernandina Beach Mill, which includes an analysis of whether the use of 100% natural gas in the No. 7 Power Boiler constitutes reasonable progress (see new Section 7.8.2.5 and Appendix B-1);

- An air construction permit for WestRock Fernandina Beach (Permit No. 0890003-074-AC) to add monitoring and recordkeeping requirements on coal consumption which were not included in the permit included in Florida’s 2021 submittal (see Appendix A-2); and
- An air construction permit for Mosaic South Pierce (Permit No 1050055-037-AC) which codifies emission limits reflective of the effective controls demonstration, which represents reasonable progress (see revised Section 7.4.1, Appendix A-7, and Appendix B-4).
- An air construction permit for JEA Northside Units 1 and 2 codifying the Mercury and Air Toxics Standards (MATS) sulfur dioxide (SO₂) limit (Permit No. 0310045-059-AC), which supplements the proposed SIP limit in Florida’s 2021 submittal (see Appendix A-4).
- An administrative correction to the JEA Northside Unit 3 permit (Permit No. 0310045-062) establishing additional recordkeeping requirements for fuel oil shipments (see Appendix A-5).

Please note that due to the permanent retirement of the WestRock Panama City Mill and the Georgia-Pacific Foley Mill, the following elements of the Department’s Pre-Hearing Regional Haze Supplemental SIP have been removed. Documentation of the permanent retirement of these two facilities is provided in **Appendices C-1** and **C-2**.

- A four-factor analysis for WestRock Panama City Mill (see revised Section 7.8.4);
- An air construction permit for WestRock Panama City Mill (Permit No. 0050009-47-AC) based on the results of the four-factor analysis;
- A four-factor analysis for Georgia-Pacific Foley Mill (see revised Section 7.8.3); and
- An air construction permit for Georgia-Pacific Foley Mill (Permit No. 1230001-121-AC) based on the results of the four-factor analysis;

Appendix ID	Description and File Names
Appendix A	Air Construction Permits
A-1	WestRock Fernandina Beach (Permit No. 0890003-074-AC)
A-2	JEA Northside Units 1 and 2 (Permit No. 0310045-059-AC)
A-3	JEA Northside Unit 3 permit (Permit No. 0310045-062-AC)
A-4	Nutrien White Springs (Permit No. 0470002-132-AC)
A-5	Mosaic South Pierce (Permit No 1050055-037-AC)
A-6	WestRock Fernandina Beach (Permit No. 0890003-046-AC)
Appendix B	Four Factor Analysis and Effective Controls Analysis
B-1	WestRock Fernandina Beach Mill Supplemental
B-2	Mosaic South Pierce Effectively Controlled Unit Analysis
Appendix C	Documentation of Permanent Retirement
C-1	WestRock Panama City Mill Permanent Retirement Letter
C-2	Georgia-Pacific Foley Mill Permanent Retirement Letter
Appendix D	Public Comments

This action completes the commitments that the Department made in Florida’s proposed Regional Haze Plan for the second Implementation Period, dated October 8, 2021. This submittal is organized to reflect specific changes that the Department is making to various elements of Florida’s 2021 submittal. The Department has not included in this document sections of the 2021 submittal that are complete and do not require any supplementation. The Department includes below the section headings in Florida’s pending Regional Haze Plan under which the Department has added supplemental information or updates.

7.6.4 Selection of Sources for Reasonable Progress Evaluation

The Department is revising this section to remove the Department’s justification for not including Mosaic South Pierce among the sources for which the Department conducted a reasonable progress evaluation. The Department subsequently determined that increases in SO₂

emissions from the Mosaic South Pierce facility since the 2011 baseline period warranted a reasonable progress analysis. Emissions were as high as 2,248 tpy in 2018, which the Department determined was due, in part, to a shift in production from other regional facilities. The significant difference between this figure and the figure that the Department used in setting the baseline (1,123 tpy) motivated the Department to include Mosaic South Pierce in its analysis. The Department is also updating this section to provide new effective controls analyses and effective controls demonstrations incorporated by permit for specified sources.

7.6.4.1 Effective Controls Analysis

The Department is revising Florida's 2021 submittal to update the section that addresses the effective controls analyses for sources in Florida for which the Department conducted a reasonable progress evaluation. Specifically, the Department is revising this section to supplement the effective controls analysis for JEA Northside Units 1 and 2 to include the facility's MATS limit, which applies at all times, including during startup and shutdown, and to include an effective controls analysis for Mosaic South Pierce. The Department has also updated information for Nutrien White Springs to include monitoring, recordkeeping, and reporting requirements applicable to that source. Note that, consistent with the Department's focus on SO₂ in the second planning period, as discussed in Section 7.4, the Department's effective controls analyses were specific to SO₂.

Mosaic South Pierce (Permit No. 1050055-037-AC) (Appendix A-5) – On February 1, 2023, the Department requested that Mosaic evaluate whether any additional measures were available to reduce SO₂ emission from the Mosaic South Pierce facility. Specifically, the Department requested that Mosaic either complete a four-factor analysis for Sulfuric Acid Plant Nos. 10 and 11 (EU 004 and 005) or demonstrate that those units were already effectively controlled. In response to the Department's request, Mosaic developed and submitted to the Department an effective control demonstration.

Sulfuric Acid Plant Nos. 10 and 11 are double absorption sulfuric acid systems equipped with two absorption towers in series to react sulfur trioxide (SO₃) with water to produce sulfuric acid. The SO₂ generated in a double absorption system sulfur furnace is catalytically oxidized to SO₃

over catalyst beds at a very high rate (99.7% or greater), which results in relatively low SO₂ emissions as compared to a single absorption system. The second bed uses a cesium-promoted catalyst, which increases the overall SO₂-to-SO₃ conversion rate. Based on a review of EPA's Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate (RACT/BACT/LAER) Clearinghouse (RBLC) database, the combination of dual absorption design and cesium-promoted catalysts represents BACT for sulfur-burning, non-single absorption column sulfuric acid plants.

The Department reviewed Mosaic's submission (**Appendix B-2**) and agreed that the Sulfuric Acid Plants at Mosaic South Pierce are effectively controlled and are therefore unlikely to have additional controls identified as part of a four-factor analysis. To codify these effective controls, Mosaic has accepted the following specific conditions for Sulfuric Acid Plant Nos. 10 and 11 (EU 004 and 005) in Permit No. 1050055-037-AC which the Department issued on September 22, 2022: As determined by continuous emission monitoring systems (CEMS), the combined SO₂ emissions shall not exceed 750 pounds SO₂ per hour on a 24-hour block average.

The Department has determined that the existing measures at Sulfuric Acid Plant Nos. 10 and 11 *are necessary* for reasonable progress and emissions limits and associated supporting conditions are required to be adopted into the SIP. The Department has already proposed that the following permit conditions from Permit No. 1050055-037-AC, issued to Mosaic South Pierce on September 22, 2022, be incorporated into Florida's SIP. The Department finds that this permitted SO₂ emissions limit represents reasonable progress for Sulfuric Acid Plant Nos. 10 and 11. These SO₂ emission limits are already approved by EPA as components in Florida's Startup, Shutdown, and Malfunction SIP. These SO₂ emission limits and associated monitoring, recordkeeping, and reporting requirements also function as a component of Florida's Regional Haze SIP. The Department has attached to this submittal Permit No. 1050055-037-AC (**Appendix A-5**) for informational purposes only.

Nutrien White Springs (Permit Nos. 0470002-122-AC and 0470002-132-AC) (Appendix A-4) – This facility is subject to the following conditions from Permit Nos. 0470002-122-AC and 0470002-132-AC, which the Department issued on December 21, 2018 and September 22, 2022, respectively, for Sulfuric Acid Plant Nos. "E" and "F" (EU 066 and EU 067): Sulfur dioxide

(SO₂) emissions shall not exceed: 2.6 lb/ton, 3-hr rolling average (not including startup and shutdown periods) and 2.3 lb/ton, 365 day rolling average (including startup and shutdown periods). Effective January 1, 2023, the following SO₂ emission cap applies to the combined CEMs-measured emissions from SAP E and F: 840 lb/hr on 24-hour block averaging period (6:00 a.m. to 6:00 a.m.).

The Department has determined that the existing measures at Sulfuric Acid Plant Nos. “E” and “F” *are necessary* for reasonable progress and emissions limits and associated supporting conditions are required to be adopted into the SIP. The Department has already proposed that the following permit conditions from Permits No. 0470002-122-AC and 0470002-132-AC, issued to Nutrien White Springs on December 21, 2018, and September 22, 2022, respectively, be incorporated into Florida’s SIP. The Department finds that these permitted SO₂ limits represent reasonable progress for Sulfuric Acid Plant Nos. “E” and “F” at the Nutrien White Springs facility. The permit that the Department issued on September 22, 2022, includes detailed monitoring, recordkeeping, and reporting requirements. These SO₂ emission limits, together with the associated monitoring, recordkeeping and reporting requirements, are components of Florida’s Startup, Shutdown, and Malfunction SIP as approved by EPA on August 4, 2023, at 88 Fed. Reg. 51,702. These SO₂ emission limits and associated monitoring, recordkeeping, and reporting requirements also function as a component of Florida’s Regional Haze SIP. The Department has attached to this submittal Permit No. 0470002-132-AC (**Appendix A-5**) for informational purposes only.

JEA Northside Units 1 and 2 (Permit No. 0310045-059-AC) (Appendix A-2) – During the public comment period for the Department’s 2021 submittal, one commenter noted that the proposed limits reflecting effective controls for JEA Northside Units 1 and 2 had exemptions during period of startup, shutdown, and malfunction. To ensure that the facility is subjected to SO₂ emission limits that apply continuously, JEA agreed to supplement the SO₂ emission limit of 0.15 lb/MMBtu, which Florida included in its 2021 Regional Haze submittal, with the MATS-based SO₂ emission limit of 0.20 lb/MMBtu, which applies continuously on a heat input-weighted 30-boiler operating day rolling average. The supplemental permit incorporating the MATS-based SO₂ limit includes work practice standards that apply during periods of startup and shutdown.

The Department has determined that the existing measures at the JEA Northside Units 1 and 2 *are necessary* for reasonable progress and emissions limits and associated supporting conditions are required to be adopted into the SIP. The Department is proposing that specific permit conditions from Permit No. 0310045-059-AC, issued to JEA Northside Units 1 and 2 on February 16, 2023, be incorporated into Florida's SIP. The Department finds that the current suite of permitted SO₂ emission limits represent reasonable progress for Units 1 and 2 at the JEA Northside facility. Florida proposes that EPA include both the existing SO₂ emission limit of 0.15 lb/MMBtu and the new MATS-based SO₂ limit as components of Florida's Regional Haze SIP. The Department has attached to this submittal Permit No. 0310045-059-AC (**Appendix A-2**) for informational purposes.

7.7 Evaluating the Four Statutory Factors for Specific Emissions Sources

Section 169A(g)(1) of the CAA and EPA's Regional Haze Rule at 40 CFR 51.308(f)(2)(i) require a state to evaluate the following four "statutory" factors when establishing the reasonable progress goal for any Class I area within a state: (1) cost of compliance; (2) time necessary for compliance; (3) energy and non-air quality environmental impacts of compliance; and (4) remaining useful life of any existing source subject to such requirements.

As noted in Florida's 2021 submittal, on August 20, 2019, EPA issued a memorandum entitled "Guidance on Regional Haze State Implementation Plan for the Second Implementation Period." This memorandum included guidance for characterizing the four statutory factors including which emission control measures to consider, selection of emission information for characterizing emissions-related factors, characterizing the cost of compliance, characterizing the time necessary for compliance, characterizing energy and non-air environmental impacts, characterizing remaining useful life of the source, characterizing visibility benefits, and reliance on previous analysis and previously approved approaches. The Department used this guidance evaluating the four statutory factors for facilities selected for reasonable progress analysis.

On July 8, 2021, EPA issued additional guidance for states to use in developing their Regional Haze SIPs. This guidance noted opportunities for states to leverage both ongoing and upcoming emission reductions under other CAA programs. EPA did reiterate, however, that it expected

states to undertake reasonable progress analyses that identify opportunities to advance the national visibility goal consistent with the statutory and regulatory requirements. The guidance focused on factors to consider for source selection, noting that states should select sources for four-factor analysis while setting the threshold at a level that captures a meaningful portion of the state's total contribution to visibility impairment to Class I areas. EPA also discussed the process for refining existing effective controls and characterizing factors for emission control measures and reviewed what control measures were necessary to make reasonable progress. The Department used this guidance in developing this Amendment to Florida's pending Regional Haze Plan.

7.8 Control Measures Representing Reasonable Progress for Individual Sources to be Included in the Long-Term Strategy

The following summarizes the Department's process for determining reasonable progress for Florida sources and whether to implement reasonable progress controls or measures.

For Florida's 2021 submittal, the Department requested that eleven facilities in Florida complete a reasonable progress analysis. Pursuant to EPA's 2019 Regional Haze Guidance, the Department allowed these facilities either to demonstrate that units that are large sources of SO₂ (i.e., those with emissions greater than five tons per year) were already effectively controlled or to complete a four-factor analysis. Many of these facilities provided the Department an analysis demonstrating that units that were large sources of SO₂ at these facilities were effectively controlled. When necessary, these facilities applied for air construction permits to codify those controls as reasonable progress limits (these analyses are documented in Section 7.6.4.1 of Florida's 2021 submittal).

Four-factor analyses were completed for units at four facilities, consistent with EPA's Cost Control Manual and EPA's 2019 and 2021 Regional Haze guidance documents. The Department used these analyses to determine whether a given control measure was cost-effective. Florida's 2021 submittal included results of the four-factor analysis for JEA Northside and WestRock Fernandina Beach.

This proposed Amendment to Florida’s pending Regional Haze Plan includes the results of an updated four-factor analyses for the No. 7 Power Boiler (EU 015) at the WestRock Fernandina Beach Mill. The Department has summarized this four-factor analysis below and included supporting documentation in **Appendix B**.

7.8.2 WestRock Fernandina Beach Mill Updated Four-Factor Analysis

7.8.2.5 Supplemental Analysis on No. 7 Power Boiler (EU 015)

As noted in Section 7.8.2 of the 2021 Regional Haze Plan, process changes made in 2016-2017 to facility emission units for demonstrating compliance with the 2010 1-Hour Primary SO₂ NAAQS resulted in decreased emissions. These changes were already included in the SO₂ Nassau County Attainment Plan SIP approved by EPA on 9/30/2016 (81 FR 67179). For the 2021 Regional Haze Plan, WestRock Fernandina Beach prepared four-factor analyses for each of these units. For the No. 5 Power Boiler, the Department determined that installing a wet scrubber or dry sorbent injection (DSI) system would not be cost-effective. Likewise, for the Nos. 4 and 5 Recovery Boilers, the Department determined that installing a flue gas desulfurization (FGD) system would not be cost-effective. The Department has, however, determined that the existing measures at the No. 5 Power Boiler and the Nos. 4 and 5 Recovery Boilers included in the SO₂ Implementation SIP approved by EPA on 9/30/2016 (81 FR 67179) *are necessary* for reasonable progress, and those emissions limits and associated supporting conditions previously adopted into Florida’s SIP should be incorporated into Florida’s Regional Haze Plan.

During the 2021 SIP submission process, the Department received a public comment regarding the four-factor analysis for the No. 7 Power Boiler at the Westrock Fernandina Beach Mill. The commenter noted that the facility and Department had not considered whether removing all coal firing from the No.7 Power Boiler was cost-effective. The Department subsequently requested that Westrock supplement its four-factor analysis to address this issue. On June 24, 2022, The Department received a supplemental four-factor analysis from WestRock addressing this issue (**Appendix B-1**).

7.8.2.5.1 Estimated Costs of Compliance

Removing Coal Firing – The estimated annual cost of removing all coal firing and using natural gas (with a backup fuel source) is based on operating data, current fuel costs (which vary based on the amount of gas consumed), and projected 2028 actual emissions. WestRock estimates that there will be a total capital investment of \$18,750,000 for the new ultra-low sulfur diesel (USLD) burners and required infrastructure for that backup fuel. The total annualized cost for removing all coal firing in the No. 7 Power Boiler would be \$9,117,240.

WestRock’s initial cost effectiveness value for removing all coal-firing at the Westrock Fernandina Beach Mill was \$7,788/ton of SO₂ removed. **Table 7-32a** shows the initial WestRock cost calculation for removing all coal firing.

**Table 7-32a. WestRock Fernandina Beach No. 7 Power Boiler
Initial Cost Effectiveness Analysis for Removing all Coal Firing**

**Table A-1c
Fuel Switching Cost (No Solid Fuel) - WestRock Fernandina Beach No. 7 Power Boiler**

CAPITAL COSTS			
Total Capital Investment for New ULSD Burners and required infrastructure:		(a)	TCI \$18,750,000
ANNUALIZED COSTS			
COST ITEM	COST FACTOR	UNIT COST	COST (\$)
Annual Operating Costs - Direct Annual Costs			
(b) Maintenance Costs	2.75% of TCI		\$515,625
(c) Bark ash landfill disposal	█ tpy	█ /ton	\$295,466
Fuel			
(d) Additional natural gas cost - Tier 3 usage rate	█ MMBtu	█ /MMBtu	\$6,328,829
(e) Additional natural gas cost - elevated price days	█ MMBtu	█ /MMBtu	\$5,572,800
(f) ULSD cost	█ thousand gal	█ /gal	\$1,052,414
(g) Coal cost savings	█ tons	█ /ton	-\$6,683,215
Total Direct Annual Costs:			DAC \$7,081,919
Annual Operating Costs - Indirect Annual Costs			
(h) Overhead	0% of TCI		\$0
(i) Administrative Charges	2% of TCI		\$375,000
(j) Property Taxes	0% of TCI		\$0
(k) Insurance	1% of TCI		\$187,500
Total Indirect Annual Costs:			IDAC \$562,500
Total Annual Costs:			TAC \$7,644,419
Cost Effectiveness			
(l) Expected lifetime of equipment, years	20		
(m) Interest rate, %/yr	4.75%		
(n) Capital recovery factor	0.079		
(o) Total Capital Investment Cost	\$18,750,000		
Annualized Capital Investment Cost:			\$1,472,821
Total Annualized Cost:			\$9,117,240
(p) SO ₂ Reduction	97.3%		
Pre-retrofit SO ₂	1,203 tons SO ₂ /yr		
Post-retrofit SO ₂ Using Burner System	32.8 tons SO ₂ /yr		
SO ₂ Removed	1,171 tons SO ₂ /yr		
Annual Cost/Ton Removed:			\$7,788

- (a) Based on project estimate performed by WestRock.
- (b) Maintenance costs were estimated based on the U.S. EPA OAQPS Alternative Control Techniques Document - NOX Emissions from Process Heaters (Revised), Document No. EPA-453/R-93-034 (September 1993).
- (c) 2019 WestRock Fernandina Beach cost to dispose of bark ash.
- (d) Projected WestRock Fernandina Beach fuel costs.
- (e) Projected WestRock Fernandina Beach fuel costs. Projecting that natural gas costs will be elevated (but less than ULSD) at least 24 days/year (518,400 MMBtu of heat input for 20 days of operation).
- (f) Projected 2022 WestRock Fernandina Beach fuel costs. WestRock expects that natural gas costs will spike and exceed ULSD costs at least 3 days/year, so that WestRock will fire ULSD instead of natural gas on those days (479 thousand gallons of ULSD for 2 days of operation).
- (g) 2019 WestRock Fernandina Beach coal cost.
- (h) No charge taken here due to operational cost savings from removing coal.
- (i) U.S. EPA Air Pollution Control Cost Manual, Section 1, Chapter 2. Any potential property tax costs have been excluded.
- (j) Pre-retrofit SO₂ emissions estimated based on projected 2028 actual throughput fuel usage. Post-retrofit SO₂ emissions estimated based on equivalent heat input and replacement of coal and bark ash with natural gas and as noted in footnote (f), ULSD. See Table A-1d for emission factors and calculations.

The Department reviewed Westrock’s analysis for consistency with EPA’s Cost Control Manual. In the control equipment calculations, WestRock used a 4.75% interest rate. This value is now closer to the current bank prime interest rate as recommended in the Cost Control Manual. WestRock assumed a 20-year equipment lifetime. This assumption may result in a slightly higher cost effectiveness value. The Department revised the cost effectiveness calculations, using the 3.25% bank prime interest rate and assumed a 30-year equipment lifetime. **Table 7-32b** shows the revised WestRock cost calculation for removing all coal firing.

**Table 7-32b. WestRock Fernandina Beach No. 7 Power Boiler
Revised Cost Effectiveness Analysis for Removing all Coal Firing**

**Table A-1c
Fuel Switching Cost (No Solid Fuel) - WestRock Fernandina Beach No. 7 Power Boiler**

CAPITAL COSTS					
Total Capital Investment for New ULSD Burners and required infrastructure: (a) TCI \$18,750,000					
ANNUALIZED COSTS					
	COST ITEM	COST FACTOR	UNIT COST	COST (\$)	
Annual Operating Costs - Direct Annual Costs					
(b)	Maintenance Costs	2.75% of TCI		\$515,625	
(c)	Bark ash landfill disposal	█ tpy	█ /ton	\$295,466	
Fuel					
(d)	Additional natural gas cost - Tier 3 usage rate	█ MMBtu	█ /MMBtu	\$6,328,829	
(e)	Additional natural gas cost - elevated price days	█ MMBtu	█ /MMBtu	\$5,572,800	
(f)	ULSD cost	█ thousand gal	█ /gal	\$1,052,414	
(g)	Coal cost savings	█ tons	█ /ton	-\$6,683,215	
Total Direct Annual Costs:				DAC	\$7,081,919
Annual Operating Costs - Indirect Annual Costs					
(h)	Overhead	0% of TCI		\$0	
(i)	Administrative Charges	2% of TCI		\$375,000	
(j)	Property Taxes	0% of TCI		\$0	
(k)	Insurance	1% of TCI		\$187,500	
Total Indirect Annual Costs:				IDAC	\$562,500
Total Annual Costs:				TAC	\$7,644,419
Cost Effectiveness					
(l)	Expected lifetime of equipment, years	30			
(m)	Interest rate, %/yr	3.25%			
(n)	Capital recovery factor	0.053			
(o)	Total Capital Investment Cost	\$18,750,000			
Annualized Capital Investment Cost:				\$987,782	
Total Annualized Cost:				\$8,632,201	
(p)	SO ₂ Reduction	97.3%			
	Pre-retrofit SO ₂	1,203 tons SO ₂ /yr			
	Post-retrofit SO ₂ Using Burner System	32.8 tons SO ₂ /yr			
	SO ₂ Removed	1,171 tons SO ₂ /yr			
Annual Cost/Ton Removed:				\$7,374	

- (a) Based on project estimate performed by WestRock.
- (b) Maintenance costs were estimated based on the U.S. EPA OAQPS Alternative Control Techniques Document - NOX Emissions from Process Heaters (Revised), Document No. EPA-453/R-93-034 (September 1993).
- (c) 2019 WestRock Fernandina Beach cost to dispose of bark ash.
- (d) Projected WestRock Fernandina Beach fuel costs.
- (e) Projected WestRock Fernandina Beach fuel costs. Projecting that natural gas costs will be elevated (but less than ULSD) at least 24 days/year (518,400 MMBtu of heat input for 20 days of operation).
- (f) Projected 2022 WestRock Fernandina Beach fuel costs. WestRock expects that natural gas costs will spike and exceed ULSD costs at least 3 days/year, so that WestRock will fire ULSD instead of natural gas on those days (479 thousand gallons of ULSD for 2 days of operation).
- (g) 2019 WestRock Fernandina Beach coal cost.
- (h) No charge taken here due to operational cost savings from removing coal.
- (i) U.S. EPA Air Pollution Control Cost Manual, Section 1, Chapter 2. Yellow-highlighted values were selected in order to conform to the values used by Florida DEP in their Regional Haze SIP submittal. WestRock believes the expected useful life of the equipment is no more than 20 years, but has utilized 30 years in this set of calculations to conform to Florida DEP's Regional Haze SIP submittal. WestRock believes that the appropriate interest rate is 4.75%, which was the rate prior to the COVID-19 pandemic, but has utilized 3.25% to conform to Florida DEP's Regional Haze SIP submittal. Any potential property tax costs have been excluded.
- (j) Pre-retrofit SO₂ emissions estimated based on projected 2028 actual throughput/fuel usage. Post-retrofit SO₂ emissions estimated based on equivalent heat input and replacement of coal and bark ash with natural gas and as noted in footnote (f), ULSD. See Table A-1d for emission factors and calculations.

Based on the revised cost information and emissions, removing all coal firing in the No. 7 Power Boiler would cost approximately \$7,374 per ton of SO₂ removed. The Department determined that both values show that removing all coal firing in the No. 7 Power Boiler at the Westrock Fernandina Beach Mill is not cost effective.

7.8.2.5.2 Time Necessary for Compliance

WestRock would need a minimum of four years to remove all coal firing for the No. 7 Power Boiler. This would include securing funding for the additional fuel costs associated with natural gas supplies.

7.8.2.5.3 Energy and Non-Air Quality Impacts of Compliance

WestRock identified one energy or non-air related impact for removing all coal firing: bark ash currently fired in the boiler would be sent for disposal to a permitted landfill. Ash disposal costs at the landfill would have to be covered by the facility.

7.8.2.5.4 Remaining Useful Life

The No. 7 Power Boiler is assumed to have a remaining useful life of thirty years or more. The Department conservatively used a lifetime of thirty years to annualize costs.

7.8.2.5.5 Summary of Findings for No. 7 Power Boiler

The primary factor that the Department used to determine whether a control measure is necessary for reasonable progress was the cost of compliance. The Department then further considered the other three factors (time necessary for compliance, energy and non-air quality impacts, and remaining useful life). In some cases, the other factors are already considered in assessing the costs, such as remaining useful life through annualizing the costs of compliance, or energy and non-air quality impacts being considered among the costs, such as increased water usage or electricity usage.

The Department finds that removing all coal firing at the No. 7 Power Boiler at the Westrock Fernandina Beach Mill would not be cost-effective. Given the extent to which coal usage caps in current permits already reduce SO₂ emissions, the Department finds that eliminating coal as a fuel source is not necessary for reasonable progress.

Permit No. 0890003-072-AC, which the Department issued to Westrock on June 24, 2021, commits to a coal cap of 250 tons/day, 30-day rolling average for the No. 7 Power Boiler (EU 015), excluding days of natural gas curtailment or supply interruption. Effective April 1, 2024, this coal cap was further reduced to 125 tons/day, excluding days of natural gas curtailment or supply interruption. Florida proposes that these requirements, together with associated monitoring, reporting, and recordkeeping requirements (Permit No. 0890003-074-AC, issued on December 16, 2021, and attached to this submittal as **Appendix A-1**) be included as components of Florida's Regional Haze SIP. The Department has determined that the existing measures at the No. 7 Power Boiler *are necessary* for reasonable progress and proposes that these permit conditions from Permit No. 0890003-074-AC issued to WestRock Fernandina Beach Mill on December 16, 2021, respectively, to be incorporated into Florida's SIP.

7.8.3 Georgia-Pacific Foley Mill Four-Factor Analysis

In October 2023, Georgia-Pacific announced the closure of the Foley Mill. At that time, Georgia-Pacific also announced its intention to seek a buyer of the Mill that could potentially operate the Mill in the future. In April 2024, Georgia-Pacific announced that there were no prospective buyers of the Mill and that its operations will permanently cease. Georgia-Pacific has provided documentation of its closure plan including steps to disable permanently the emission units that the Department had proposed to include in Florida's Supplemental Regional Haze SIP (see **Appendix C-2**). As a result, the Department is withdrawing from Florida's Supplemental Regional Haze SIP the air construction permit for Foley Mill and all of the proposed emission limits and associated documentation, including the Department's review of the four-factor analysis completed by Georgia-Pacific.

7.8.4 WestRock Panama City Mill Four-Factor Analysis

In April 2022, WestRock announced the closure of the Panama City Mill, and operations ceased in June 2022. WestRock has provided documentation of its closure plan including steps to disable permanently the emission units that the Department had proposed to include in Florida's Supplemental Regional Haze SIP (see **Appendix C-1**). As a result, the Department is withdrawing from Florida's Supplemental Regional Haze SIP the air construction permit and all

of the proposed emission limits and associated documentation, including the Department's review of the four-factor analysis completed by WestRock.

10.4 State and Federal Land Manager Consultation

EPA's Regional Haze Rule requires states to provide opportunity for consultation with Federal Land Managers early in the SIP development process (40 CFR 51.308(i)(2)):

The State must provide the Federal Land Manager with an opportunity for consultation, in person at a point early enough in the State's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the Federal Land Manager can meaningfully inform the State's decisions on the long-term strategy. The opportunity for consultation will be deemed to have been early enough if the consultation has taken place at least 120 days prior to holding any public hearing or other public comment opportunity on an implementation plan (or plan revision) for regional haze required by this subpart. The opportunity for consultation on an implementation plan (or plan revision) or on a progress report must be provided no less than 60 days prior to said public hearing or public comment opportunity. This consultation must include the opportunity for the affected Federal Land Managers to discuss their:

- (i) Assessment of impairment of visibility in any mandatory Class I Federal area; and
- (ii) Recommendations on the development and implementation of strategies to address visibility impairment.

10.4.1 Federal Land Manager 60-day Comment Period

On June 8, 2023, the Department sent consultation letters to the U.S. Fish and Wildlife Service (FWS), the U.S. Forest Service (FS), and the U.S. National Park Service (NPS) Federal Land

Managers (FLMs) together with a preliminary copy of the draft proposed Amendments to Florida's Regional Haze Plan for the Second Implementation Period for a 60-day comment period (copies of the consultation letters are provided in Florida's SIP Submittal Number 2024-01 (Supplement to Florida Regional Haze Plan)).

Continuing Consultation

40 CFR 51.308(i)(4) requires that each state's Regional Haze SIP include procedures for continuing consultation between the state and FLMs on the implementation of the visibility protection program. Florida commits to ongoing consultation with the FLMs. Florida will follow the consultation requirements in 40 CFR 51.308(i)(3) on any future plan revisions or progress reports, and Florida will engage with the FLMs upon request on any matters related to regional haze affected by Florida sources.

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