APPENDIX A

Florida Department of Environmental Protection
Division of Air Resource Management

Regional Haze Supplemental SIP Part II
Facility Permit and Documentation

Georgia Pacific Foley Mill
(Permit No. 1230001-121-AC)

FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

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Secretary

FPERMITTEE

Foley Cellulose LLC
One Buckeye Drive
Perry, Florida 32348-7702

Authorized Representative:
Thomas Pazdera, V.P., and General Manager

Air Permit No. 1230001-121-AC
Permit Expires: December 31, 2024
Minor Air Construction Permit
Foley Mill
TRS Pre-Scrubber Media and Regional Haze Project

PROJECT

This is the final air construction permit, which authorizes the use of white liquor as an alternative scrubbing liquid in the total reduced sulfur (TRS) pre-scrubber used to control emissions of TRS and sulfur dioxide (SO_2) in the No. 1 Power Boiler and No. 1 Bark Boiler when low-volume, high-concentration (LVHC) non-condensable gases (NCG) are being combusted in the boilers. In addition, this permit establishes conditions to reduce SO_2 emissions from the existing Foley Mill in accordance with Florida's Regional Haze Plan. The proposed work will be conducted at the existing Foley Mill, which is a pulp mill categorized under Standard Industrial Classification No. 2611. The existing Foley Mill is in Taylor County at One Buckeye Drive in Perry, Florida. The UTM coordinates are Zone 17, 256.7 kilometers (km) East and 3,328.7 km North; Latitude: 30°04'3" North and Longitude: 83°31'41" West.

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.). Also, this permit addresses sulfur dioxide emissions as part of Florida's Regional Haze Plan pursuant to the requirements in 40 CFR 51.308. The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. 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.

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 Lyle Read, P.E.

Digitally signed by David Read
Date: 2023.10.20 12:37:03 -04'00'

David Lyle Read, P.E., Environmental Administrator
Permit Review Section
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Construction Permit package 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 Pazdera, V.P. and General Manager, Foley Mill: Thomas.Pazdera@gapac.com
Mr. Zachary Webb, Environmental Engineer, Foley: Zachary.Webb@gapac.com
Mr. Neel Kotra, P.E., Project Engineer, TRC: NKotra@trscompanies.com
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DEP NED Email: DEP_NED@dep.state.fl.us
Ms. Amy Hilliard, DEP: Amy.Hilliard@FloridaDEP.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.

FACILITY DESCRIPTION

The Foley Cellulose LLC, Foley Mill, is an existing softwood Kraft Process Pulp Mill that manufactures market pulps and dissolving cellulose pulps consisting of the following major activities: two Kraft pulp mills, chemical recovery, causticizing, purification (*i.e.*, bleaching), papermaking, woodyard, and utility operations. The dissolving cellulose pulp produced at this plant is used in products such as food casings, rayon industrial cord, acetate fibers and plastics, as well as thickeners for personal care products, food and pharmaceuticals. The bleached market pulps are used in products such as disposable diapers, feminine hygiene products and incontinence products.

TABLE 1. THE EXISTING FACILITY CONSISTS OF THE FOLLOWING EMISSIONS UNITS (EU).

EU No.	Brief Description
Regulated Emissions Units	
002	No. 1 Power Boiler
003	No. 2 Power Boiler
004	No. 1 Bark Boiler
006	No. 2 Recovery Furnace
007	No. 3 Recovery Furnace
011	No. 4 Recovery Furnace
019	No. 2 Bark Boiler
021	No. 2 Smelt Dissolving Tank
022	No. 3 Smelt Dissolving Tank
023	No. 4 Smelt Dissolving Tank
024	No. 4 Lime Kiln and Storage Bins
025	Lime Slakers
040	Tall Oil Processing
041	No. 2 Purification Plant
045	No. 1 Purification Plant
046	Pulping System
051	Line No. 3
052	Emergency Diesel Generators (266 Horsepower (HP) and (2) 51 HP)
053	Emergency Diesel Generators (365 HP and 111.3 HP)
054	Emergency Diesel Generator (235 HP)
Unregulated Emissions Units and Activities	
047	Facility-Wide Fugitive Emissions
048	Chemical Recovery Area
049	Drying and Converting Warehouse
050	Wood Yard

PROPOSED PROJECT

The Foley Mill is requesting to use white liquor as an alternative scrubbing liquid in the TRS pre-scrubber. The TRS pre-scrubber is used to control emissions of TRS and SO_2 in the No. 1 Power Boiler and No. 1 Bark Boiler when LVHC NCG are being combusted. Also, as part of Florida's Regional Haze Plan, this permit reduces SO_2 emissions from the existing mill by:

- Optimizing the use of natural gas;
- Reducing the maximum sulfur content of No. 6 fuel oil;
- Removing tall oil from the fuel slate;
- Maintaining and appropriate pH level and flow in the existing wet scrubber on Bark Boiler No. 1; and
- Establishing a SO_2 emissions cap for the Nos. 2, 3, and 4 Recovery Furnaces.

TABLE 2. THE FOLLOWING EXISTING EU WILL BE AFFECTED BY THIS PROJECT.

EU No.	Description
002	No. 1 Power Boiler
004	No. 1 Bark Boiler
006	No. 2 Recovery Furnace
007	No. 3 Recovery Furnace
011	No. 4 Recovery Furnace
019	No. 2 Bark Boiler

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.
- This facility operates units subject to New Source Performance Standards (NSPS) of Title 40 Code of Federal Regulations (CFR) Part 60.
- This facility operates units subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Permit Review Section in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Permit Review Section mailing address is 2600 Blair Stone 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 Northeast District at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.
3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing 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: 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. Construction and Expiration: The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]
8. 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.

   [Rule 62-212.400(12), F.A.C.]
9. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation

permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. 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 with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050 and Chapter 62-213, F.A.C.]

A. No. 1 Power Boiler & No. 1 Bark Boiler (EU 002 & EU 004)

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
002	No. 1 Power Boiler
004	No. 1 Bark Boiler
019	No. 2 Bark Boiler

No. 1 Power Boiler. The No. 1 Power Boiler has a maximum heat input rate of 249 million British thermal units per hour (MMBtu/hour) and is capable of producing 195,000 lb/hour of steam flow for Mill use. The boiler fires natural gas, No. 6 fuel oil, and on-specification (on-spec) used oil. The boiler serves as a backup combustion device to the No. 1 Bark Boiler for combustion of LVHC, NCG from the Pulping System MACT I (EU 046). The NCG are collected and routed to a TRS pre-scrubber prior to entering the boiler to control emissions of TRS compounds.

No. 1 Bark Boiler. The No. 1 Bark Boiler was designed with a nominal heat input rate of 300 MMBtu/hour (included for informational purposes only) and is capable of producing 200,000 lb/hour (24-hour average) of steam flow for Mill use. The boiler fires wood materials such as bark, chips, sawdust and other such wood fiber material, No. 6 fuel oil, facility generated on-spec used oil, and natural gas. The boiler is the primary control device used to combust LVHC NCG from the Pulping System MACT I (EU 046). The NCG are collected and typically routed through the spray nozzle-type TRS pre-scrubber to this boiler for destruction. Particulate matter (PM) emissions are controlled by a cyclone collector and a wet, Venturi scrubber. Water is utilized as the scrubbing media. Fly ash collected by the cyclone collector is recirculated back to the boiler. SO_2 emissions are controlled by internal absorption and partial removal in the wet, Venturi scrubber. Water flow rate and pH to the scrubber are adjusted to control SO_2 emissions from the scrubber. Following the scrubber is a chevron type demister (entrainment separator). Nitrogen oxide (NO_X) emissions are continuously monitored by a continuous emission monitoring system (CEMS). The boiler began operation in 1953.

No. 2 Bark Boiler is capable of producing 395,000 lb/hour of steam (24-hour average) and fires a variety of wood materials (bark, chips, sawdust, etc.) natural gas, No. 6 fuel oil, and facility-generated on-specification used oil. Flue gases are split into two streams. One stream flows through the economizer, wet venturi scrubber, demister and then out the stack. The other stream bypasses the economizer and goes directly to a cyclone collector and second wet venturi scrubber. Both scrubbers utilize water as the scrubbing media. Collected particulate is re-injected into the boiler. The bark boiler commenced operation in 1954.

The exhaust stack is a common stack that is shared with the No. 1 Power Boiler (EU 002), No. 2 Power Boiler (EU 003), No. 1 Bark Boiler (EU 004), and No. 2 Bark Boiler (EU 019). The nominal exhaust stack parameters for the stack (all four emission units, EP21), are: 13 feet in diameter; 225 feet in height; flow rate of 558,627 actual cubic feet per minute (acfm); and an exit temperature of 232 degrees Fahrenheit (ºF).

{Permitting Note: These emission units are is regulated under Rule 62-212.400, F.A.C., PSD; Rule 62-296.404(3), F.A.C., Tall Oil Plants and Kraft (Sulfate) Pulp Mills; and Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 MMBtu/Hour Heat Input, New and Existing Emissions Units; NESHAP Subpart A, General Provisions, and Subpart DDDDD, NESHAP for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, of 40 CFR 63, adopted and incorporated by reference in Rule 62-204.800(11)(b) and (d), F.A.C. These boiler are also subject to NESHAP Subpart S, NESHAP from the Pulp and Paper Industry, for only the applicable requirements for controlling emissions from affected units subject to this rule, of 40 CFR 63, adopted and incorporated by reference in Rule 62-204.800(11)(b) and (d), F.A.C.; and NSPS Subpart A, General Provisions and Subpart BBa, Standard of Performance for Kraft Pulp Mill Affected Sources which Construction, Reconstruction, or Modification Commenced After May 23, 2013, for only the applicable requirements for controlling emissions from affected units subject to this rule, of 40 CFR 60, adopted and incorporated by reference in Rule 62-204.800(8)(b) and (c), F.A.C. The No. 1 Bark Boiler is also regulated under NSPS Subparts A, General Provisions, and Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, of 40 CFR 60, adopted and

incorporated in Rule 62-204.800(8)(b) and (c), F.A.C.; and Compliance Assurance Monitoring (CAM), of 40 CFR 64, adopted and incorporated by reference in Rule 62-204.800, F.A.C. }

EXISTING PERMIT CONDITIONS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emission unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and the revised conditions supersede the original conditions cited in the permits stated below. Except for the modified conditions noted below, all other previously established permits and conditions remain in effect. [Rule 62-4.070, F.A.C.]

EQUIPMENT

2. TRS Pre-Scrubber: The permittee is authorized to use white liquor as an alternative scrubbing liquid in the TRS pre-scrubber. The pre-scrubber is used to control emissions of TRS and SO_2 in the No. 1 Power Boiler and No. 1 Bark Boiler when LVHC NCG are being combusted in the boilers.
[Design, Application No. 1230001-121-AC]

TESTING REQUIREMENTS

3. Initial Compliance Tests: These emissions units shall be tested to demonstrate initial compliance with the specification for TRS removal efficiency. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. The rate of the white liquor used to meet the control efficiency of 50% or more for reducing TRS emissions shall be determined during the initial test. This shall be accomplished through simultaneous measurements of TRS immediately upstream and downstream of the pre-scrubber. Subsequent tests of TRS removal efficiency are not required. However, the Department may require special tests in accordance with Rule 62-297.310(8), F.A.C. [Rules 62-4.070(3) and 62-297.310(8)(b)1, F.A.C.; and Application No. 1230001-121-AC]

4. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(9), F.A.C.]

   {Permitting Note: Air compliance test notifications can now be completed online in the Department's Business Portal. To access this online process, go to http://www.fldepportal.com/go/home.}

5. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
16, 16A, 16B, 16C	Determination of TRS Emissions from Stationary Sources.

   The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800, F.A.C.; Appendix A of 40 CFR 60; and Application No. 1230001-121-AC]

RECORDS AND REPORTS

6. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the average white liquor scrubbing flow rate. [Rule 62-297.310(10), F.A.C.]

PERMITS BEING MODIFIED

The following permit condition is revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight. Except for the modified condition noted below, all other previously established permits and conditions remain in effect.

Permit No. 1230001-077-AC, Subsection A

7. Specific Condition **7** (TRS Pre-Scrubber Parameter Monitoring). This condition is revised as follows:

    7. TRS Pre-Scrubber Parameter Monitoring: While NCGs are directed to the No. 1 Power Boiler, weak wash from the lime mud washing system (scrubbing medium) shall be continuously added to the pre-scrubber at a minimum of 50 gallons per minute or white liquor shall be continuously added to the pre-scrubber at a minimum flow rate determined in the initial test based on a 3-hour average. The~~is~~ flow set point~~s~~ shall be continuously monitored and verified on an annual basis. Monitoring records shall be maintained and available for inspection by the Department. [Rule 62-4.070(3), F.A.C.; Permit No. 1230001-018-AC; and Application No. 1230001-121-AC]

    {Permitting ~~n~~Note: After completion of the project and the initial pre-scrubber removal efficiency test~~s~~, the facility may update/modify the existing compliance assurance monitoring (CAM) plan for controlling SO_2 emissions from the No. 1 Bark Boiler. The CAM plan for the No. 1 Bark Boiler could include a combination of monitoring the weak wash and white liquor addition rate to the pre-scrubber, the pH of the No. 1 Bark Boiler's Venturi scrubber, the flow rate of the Bark Boiler's Venturi scrubber or other appropriate parameters.}

NO. 1 POWER BOILER

8. Authorized Fuels: The No. 1 Power Boiler shall fire only natural gas except for periods of natural gas curtailment, pipeline disruptions, or physical mill problems that otherwise prevent the firing of natural gas in this unit. When necessary, liquid fuels may be fired during these exceptional periods. Tall oil is no longer an authorized fuel. Within one working day, the permittee shall notify the Compliance Authority of the inability to fire natural gas, the switch to liquid fuels, and the underlying cause that prevents gas firing. To determine compliance with this requirement, the permittee shall use the existing liquid fuel flow meters to monitor and record fuel usage. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

9. Maximum Sulfur Content: For future additions of No. 6 fuel oil to the common tank, the maximum sulfur content shall be 1.02% by weight with compliance determined by maintaining records of fuel deliveries, analytical methods, and results of analysis. This specification is effective upon issuance of the final permit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

10. Limitation on Firing of LVHC NCG Gases: The No. 1 Power Boiler shall only combust the LVHC NCG gases when the No. 1 Bark Boiler is offline, unavailable to burn NCG gases, or as necessary for compliance with the requirements of 40 CFR 63, Subpart S or other rules such as monitoring for detectable leaks in a closed vent system. The permittee shall keep records of all times that the No. 1 Power Boiler is combusting LVHC NCG gases and the reason why the No. 1 Bark Boiler is unavailable as the primary control device. [Rule 62-4.070, F.A.C.; and Application No. 1230001-121-AC]

11. Fuel Sulfur Methods: The permittee shall determine sulfur content of each fuel based on the following sampling and analytical methods.

Method	Description of Method and Comments
ASTM D2622	Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry.
ASTM D4294	Method for Sulfur Content

Method	Description of Method and Comments
ASTM D1298	Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products
ASTM D4057	Manual Sampling of Petroleum and Petroleum Products
ASTM D129, D1552	Method for Sulfur in Petroleum Products
ASTM D-240	Method for Heat of Combustion of Liquid Hydrocarbon Fuels
SW-846, Method 9038	Evaluating Solid Waste, Physical/Chemical

Other more recent or equivalent ASTM (American Society for Testing and Materials) methods or department-approved methods are also acceptable. No other methods may be used unless prior written approval is received from the Department. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

12. Fuel Oil Analysis: At least once per month, a representative sample shall be taken from the common tank and analyzed to determine the fuel sulfur content. The sample shall be analyzed for the sulfur content using the methods specified in this permit. A certified vendor analysis of the sulfur content may be used to satisfy this requirement. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

13. Fuel Deliveries: For each delivery of liquid fuel, the permittee shall record the amount of fuel delivered in gallons and the sulfur content of the fuel in percent sulfur by weight. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

14. Fuel Firing Records: The permittee shall maintain a written or electronic log of the monthly usage of each fuel. The permittee shall document all periods of natural gas curtailment, pipeline disruptions, or physical mill problems that otherwise prevent the firing of natural gas in this unit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

NOS. 1 AND 2 BARK BOILERS

15. Authorized Fuels: The Nos. 1 and 2 Bark Boilers shall fire only wood materials and natural gas, except for periods of natural gas curtailment, gas pipeline disruptions, system readiness testing, or physical mill problems that otherwise prevent the firing of natural gas in this unit. When necessary, liquid fuels from the common tank may be fired during these exceptional periods. Tall oil is no longer an authorized fuel. Within one working day, the permittee shall notify the Compliance Authority of the inability to fire natural gas, the switch to liquid fuels, and the underlying cause that prevents gas firing. To determine compliance with this requirement, the permittee shall use the existing fuel flow meters to monitor and record fuel usage. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

16. Maximum Sulfur Content: For future additions of No. 6 fuel oil to the common tank, the maximum sulfur content shall be 1.02% by weight with compliance determined by maintaining records of fuel deliveries, analytical methods, and results of analysis. This specification is effective upon issuance of the final permit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

17. TRS Pre-Scrubber: One year after the effective date of this permit, LVHC NCG gases shall be directed through the TRS pre-scrubber prior to combustion in the No. 1 Bark Boiler. The TRS Pre-Scrubber may be bypassed for maintenance purposes or due to malfunction or operational issues of the unit. The permittee shall document any period that exceeds one hour that the TRS pre-scrubber is not available when combusting LVHC NCG in No. 1 Bark Boiler, the reason why the TRS pre-scrubber is not available, and the corrective actions taken. [Rule 62-4.070, F.A.C.; and Application No. 1230001-121-AC]

18. Wet Venturi Scrubber: At all times that LVHC NCG or oil is fired in the No. 1 Bark Boiler, the Wet Venturi Scrubber shall be operational for minimization of SO_2 emissions. The Wet Venturi Scrubber shall meet the following parametric limits while oil or LVHC NCG are being fired: maintain a Ph of at least 8.0 (3-hour block average) and maintain a scrubber flow rate of at least 1,000 gallons per minute (gpm) (3-hour block average). [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

19. Circumvention: The permittee shall not circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

20. Fuel Sulfur Methods: The permittee shall determine sulfur content of each fuel based on the following sampling and analytical methods.

Method	Description of Method and Comments
ASTM D2622	Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry.
ASTM D4294	Method for Sulfur Content
ASTM D1298	Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products
ASTM D4057	Manual Sampling of Petroleum and Petroleum Products
ASTM D129, D1552	Method for Sulfur in Petroleum Products
ASTM D-240	Method for Heat of Combustion of Liquid Hydrocarbon Fuels
SW-846, Method 9038	Evaluating Solid Waste, Physical/Chemical

Other more recent or equivalent ASTM (American Society for Testing and Materials) methods or department-approved methods are also acceptable. No other methods may be used unless prior written approval is received from the Department. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

21. Fuel Oil Analysis: At least once per month, a representative sample shall be taken from the common tank and analyzed to determine the fuel sulfur content. The sample shall be analyzed for the sulfur content using the methods specified in this permit. A certified vendor analysis of the sulfur content may be used to satisfy this requirement. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

22. Wet Scrubber Parameter Monitoring: At all times that LVHC NCG or oil is fired, the permittee shall monitor the scrubber water pH in standard pH units using a pH probe and the water flow rate in gpm using a water flow rate sensor. Each monitoring device shall be located on the scrubber water supply line. Each monitoring device shall be calibrated at least once per year in accordance with the manufacturer's recommendations. Readings for each parameter recorded at least once every 15 minutes. Block hourly averages shall be calculated from the 15-minute readings recorded. Three-hour block averages shall be calculated from the hourly block averages. The permittee shall document any period exceeding one hour when the parameter monitors are not available, and any corrective actions taken. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

23. Fuel Deliveries: For each delivery of liquid fuel, the permittee shall record the amount of fuel delivered in gallons and the sulfur content of the fuel in percent sulfur by weight. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

24. Fuel Firing Records: The permittee shall maintain a written or electronic log of the monthly usage of each fuel. The permittee shall document all periods of natural gas curtailment, pipeline disruptions, system readiness testing, or physical mill problems that otherwise prevent the firing of natural gas in this unit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

25. Wet Scrubber Parameter Recordkeeping: The permittee shall record the 15-minute readings, the one-hour block average, and the three-hour block average in a written or electronic log of the scrubber water pH in standard pH units using a pH probe and the water flow rate in gpm using a water flow rate sensor. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

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

EU No.	Brief Description
006	No. 2 Recovery Furnace
007	No. 3 Recovery Furnace
011	No. 4 Recovery Furnace

No. 2 Recovery Furnace is a low-odor, non-direct contact evaporator unit that produces approximately 380,000 lb/hour of steam by firing black liquor. The furnace was originally constructed by Babcock & Wilcox in 1957 as a direct-contact evaporator design recovery furnace and later modified. Particulate matter emissions are controlled by an electrostatic precipitator. The exhaust stack is equipped with a CEMS to continuously monitor CO, NOx, SO_2 and TRS. Opacity is continuously monitored by a COMS.

No. 3 Recovery Furnace is a low-odor non-direct contact evaporator unit that produces approximately 325,000 lb/hour of steam by firing black liquor. The furnace was originally constructed by Combustion Engineering in 1964 as a direct-contact evaporator design recovery furnace. Particulate matter emissions are controlled by an electrostatic precipitator. The exhaust stack is equipped with a CEMS to continuously monitor CO, NOx, SO_2 and TRS. Opacity is continuously monitored by a COMS.

No. 4 Recovery Furnace is a low-odor non-direct contact evaporator unit that produces approximately 450,000 lb/hour of steam by firing black liquor. The furnace was originally constructed by Babcock & Wilcox in 1973 and began operation in 1974 with a membrane wall construction to minimize air in-leakage. Particulate matter emissions are controlled by an electrostatic precipitator. The exhaust stack is equipped with a CEMS to continuously monitor SO_2 and TRS. Opacity is continuously monitored by a COMS.

In addition to black liquor with a solids content ranging approximately between 65-72%, each recovery furnace is authorized to fire the following fuels for startup, shutdown, and as a supplemental fuel to maintain flame stability in the furnace: No. 6 fuel oil, No. 2 distillate oil, on-specification used oil, natural gas, ultra-low sulfur distillate oil, and methanol (Nos. 2 and 4 Recovery Furnace only).

EXISTING PERMIT CONDITIONS

1. Other Permits: The condition of this permit supplement all previously issued air construction and operation permits for these recovery furnaces. [Rule 62-4.070, F.A.C.]

EMISSIONS STANDARDS AND PERFORMANCE REQUIREMENTS

2. Authorized Fuels: The recovery furnaces shall fire black liquor as the primary fuel for recovery operations. Natural gas and authorized liquid fuels may be fired to supplement recovery operations when necessary. Tall oil is no longer an authorized fuel. To determine compliance with this requirement, the permittee shall use the existing fuel flow meters to monitor and record fuel usage. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

3. Maximum Fuel Sulfur Content: For future additions of No. 6 fuel oil to the common tank, the maximum sulfur content shall be 1.02% by weight with compliance determined by maintaining records of fuel deliveries, analytical methods, and results of analysis. This specification is effective upon issuance of the final permit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

4. SO_2 Emissions Cap: Combined SO_2 emissions from the Nos. 2, 3, and 4 Recovery Furnaces shall not exceed the 3,200 tons per consecutive 12-operating months, rolled monthly. The first 12-operating month period begins January 1, 2024. An operating month is defined as a month where one, two or all three furnaces operate for a minimum of one cumulative hour. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

TESTING REQUIREMENTS

5. Fuel Sulfur Methods: The permittee shall determine sulfur content of each fuel based on the following sampling and analytical methods.

Method	Description of Method and Comments
ASTM D2622	Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry.
ASTM D4294	Method for Sulfur Content
ASTM D1298	Method for Density, Relative Density, or API Gravity of Crude Petroleum and Liquid Petroleum Products
ASTM D4057	Manual Sampling of Petroleum and Petroleum Products
ASTM D129, D1552	Method for Sulfur in Petroleum Products
ASTM D-240	Method for Heat of Combustion of Liquid Hydrocarbon Fuels
SW-846, Method 9038	Evaluating Solid Waste, Physical/Chemical

Other more recent or equivalent ASTM (American Society for Testing and Materials) methods or department-approved methods are also acceptable. No other methods may be used unless prior written approval is received from the Department. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

6. Fuel Oil Analysis: At least once per month, a representative sample shall be taken from the common tank and analyzed to determine the fuel sulfur content. The sample shall be analyzed for the sulfur content using the methods specified in this permit. A certified vendor analysis of the sulfur content may be used to satisfy these requirements. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

CONTINUOUS EMISSIONS MONITORING REQUIREMENTS

7. SO_2 CEMS: An SO_2 CEMS shall be installed and operated to monitor and record SO_2 emissions from each recovery furnace. Each CEMS shall be calibrated and maintained to meet the quality assurance requirements of requirements specified in Appendix D of this permit including periodic Relative Accuracy Test Assessments (RATA). The monitoring data shall be used to demonstrate compliance with the SO_2 emissions caps specified in this permit and to report emissions for purposes of Title V fees. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

RECORDS

8. Fuel Deliveries: For each delivery of liquid fuel, the permittee shall record the amount of fuel delivered in gallons and the sulfur content of the fuel in percent sulfur by weight. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

9. Fuel Firing Records: The permittee shall maintain a written or electronic log of the monthly usage of each fuel. The permittee shall document all periods of natural gas curtailment, pipeline disruptions, or physical mill problems that otherwise prevent the firing of natural gas in this unit. [Rule 62-4.070, F.A.C.; Florida Regional Haze Plan; and Application No. 1230001-121-AC]

REPORTS

10. Engineering Study: The permittee shall have an engineering study conducted by an independent professional engineer to evaluate the following parameters for each recovery furnace: liquor sulfidity, liquor solids content, bed temperature, stack oxygen content, furnace load, auxiliary fuel use, sodium salt fume in the upper furnace, furnace design, and SO_2 emissions. The study shall collect parametric operating data for at least 400 hours on each recovery furnace. Based on an analysis of the data collected, the study shall determine which parameters, and which combination of parameters, have a significant impact on SO_2 emissions. The study shall recommend a set of parameters and appropriate operating ranges to minimize SO_2 emissions. A report summarizing the data collected and the results of the study shall be submitted to the Division of Air Resource

Management within 18 months of restarting any of the recovery furnaces. [Rule 62-4.070, F.A.C.; and Application No. 1230001-121-AC]