

Statement of Basis

International Paper Company – Prattville Mill Autauga County Facility No. 201-0001

International Paper Prattville Mill has applied for a third renewal of the Major Source Operating Permit 201-0001. This proposed Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Background

The Prattville Mill is a pulp and paper mill located in Prattville, Alabama. The Prattville, AL site is located in Autauga County, which is classified as a Class II county for particulates. The primary activities for the mill are pulp and paper production. The facility is a major source with respect to Title V, PSD, and the MACT/NESHAP standards. Prattville is a major source operating facility for the following pollutants: PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, VOC, H₂SO₄, TRS, GHG's and HAP's.

This is a proposed third renewal of an existing Title V Major Source Operating Permit. The current permit was issued on November 12, 2015, with an effective date of January 1, 2016, and expires on December 31, 2020.

Pulp Mill Area

Prattville's Pulp Mill Area consists of the No. 1 Digester, No. 2 Digester, No. 3 Digester, No. 1 Wash Plant, No. 2 Wash Plant, No. 3 Wash Plant, No. 4 Wash Plant, and the No. 5 Wash Plant.

Digesters

The Prattville Mill operates a kraft pulping process to produce pulp from pine, hardwood, or a combination of pine and hardwood. Wood chips are continuously fed into the Kamyr Digester Systems along with white liquor, consisting of sodium hydroxide and sodium sulfide, to aid in cooking the chips. From the digesters, pulp is sent to the blow tanks for storage before being processed through the wash plants. Turpentine is produced as a by-product of pulping and is processed in the Tall Oil Plant.

The K1 digester was installed in 1967, prior to the applicability date for 40 CFR Part 60, Subpart BB, and is not subject to New Source Performance Standards (NSPS) requirements. It is subject to the State Only regulations for TRS found in 335-3-5-.04 (5). Digesters K2 and K3 were installed in 1980 and are subject to 40 CFR Part 60, Subpart BB.

All three digesters are subject to the MACT found in 40 CFR Part 63, Subpart S.

Digesters K-2 and K-3 were modified in 1998 as part of a "stretch" project to provide incremental pulp production increases for the mill. The total production capacity for the three digesters are 3700 air dried tons of pulp (ADTP) per day. Individual operating capacities for each digester have been

updated in this renewal to reflect efficiency improvement. No physical changes were made to the digesters and the total capacity remains at 3700 ADTP/day.

Control Equipment

Low Volume High Concentration (LVHC) gases from the digester system’s condensers and decanters are collected and incinerated in either the No. 1 Power Boiler or No. 2 Lime Kiln. High Volume Low Concentration (HVLC) gases from the blow tanks and liquor filters are collected and incinerated in either the No. 1 Power Boiler or No. 2 Power Boiler. Digester foul condensates are collected from the relief vapor condensers, turpentine condensers, and after coolers. The condensates are stored in the foul condensate collection tank before being treated in the Condensate Stripper.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
HAPs (K1, K2, K3)	Collection and Incineration	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
TRS (K2 & K3)	Incineration	40 CFR Part 60, Subpart BB	Once per day, ensure the gases are being incinerated.
TRS (K1)	Incineration	335-3-5-.04 (5) (State only)	Once per day, ensure the gases are being incinerated.

Brown Stock Washers

The Prattville mill operates five Brown Stock Wash Plants to refine pulp into acceptable fiber, screen out rejects, and separate pulping liquor from the accepted stock. Pulp stock is fed into the rotary drum vacuum washers from the digester blow tanks. A vacuum pulls the liquor through the screen leaving behind a mat of pulp. The mat pulp is then scraped from the screen and is repulped and diluted before being sent through additional wash stages. After the final stage of washing, the pulp stock is moved to a High Density Storage Tank to be used in the paper mill.

The No. 1 and 2 Brown Stock Washers were installed in 1967 and the No. 3 was installed in 1975, prior to the applicability date for the NSPS found in 40 CFR Part 60, Subpart BB. The No. 4 and 5 Wash Plants were installed in 1979 and are subject to NSPS 40 CFR Part 60, Subpart BB.

All the brown stock washers are subject to the MACT found in 40 CFR Part 63, Subpart S.

Control Equipment

HVLC gases are collected from the washer hoods and foam breakers and incinerated in either the No. 1 Power Boiler or No. 2 Power Boiler.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
HAPs (All)	Collect and Incineration	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
TRS (No. 4 & 5)	Incineration	40 CFR Part 60, Subpart BB	Once per day, ensure the gases are being incinerated.

Evaporator Area

The Evaporator Area includes three multi-effect evaporator sets, the No. 1 Evaporator, No. 2 Evaporator, and No. 3 Evaporator, and the Condensate Stripper.

Evaporators

The purpose of the evaporator sets is to concentrate black liquor prior to being burned in the recovery furnace. Black liquor is fed through the tubes of an evaporator effect while steam surrounds the tubes causing the liquor to boil. The liquor passes through the evaporator effects and is sent to a black liquor oxidation system before being sent to the recovery furnace. The vapor from the boiled liquor provides heat for the following effects and is finally condensed and sent to the condensate stripping system.

The E1 evaporator was installed in 1968 prior to the applicability date for 40 CFR Part 60, Subpart BB. However, in 1998 the evaporators were modified as part of a mill “stretch project” to support the incremental pulp production increase of digesters K-2 and K-3. As a result, the E1 evaporator became subject to Subpart BB requirements. As part of the third renewal, references to Subpart BB were added for the E-1 evaporator. Evaporator’s E2 and E3 were installed in 1980 and are subject to 40 CFR Part 60, Subpart BB.

All evaporators are subject to the MACT found in 40 CFR Part 63, Subpart S.

Control Equipment

Vapor from evaporators are condensed and treated in the condensate stripper.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
HAPs (All)	Collect and Incinerate	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
TRS (All)	Incineration	40 CFR Part 60, Subpart BB	Once per day, ensure the gases are being incinerated.

Condensate Stripper

The Condensate Stripper uses steam to strip methanol, TRS, and other HAPs from foul condensate. Stripper off gases are incinerated in the power boilers while the stripped condensate is sent to the pulp mill for use in the brown stock washers.

The Condensate Stripper is subject to the MACT found in 40 CFR Part 63, Subpart S.

Control Equipment

The condensate stripped is used as a control device for process condensates and is required to remove 92% or more of total HAPs per ton of oven dried pulp. Stripper off gases are controlled through incineration in either the No. 1 or 2 Power Boiler.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
HAPs	Remove 92%	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S or effective steam ratio

Caustic Area

The Caustic Area converts unclarified green liquor into white liquor to be used in the pulp mill cooking area. The Caustic Area consists of two processes, causticizing and lime recovery. The Causticizing cycle begins by clarifying green liquor (containing sodium carbonate) received from the recovery furnace smelt tanks. Insoluble impurities (dregs) are removed from the green liquor to prevent fouling and interference with the chemical reactions. The clarified green liquor is fed into either the No. 1 or No. 2 Slaker where lime (calcium oxide) begins to react with the water in the green liquor to form calcium hydroxide (slaking lime). This mixture is sent to a series of causticizers where the reaction is completed with the formation of sodium hydroxide (white liquor) and calcium carbonate (lime mud). Following the causticizers, the slurry is processed through a white liquor pressure filter to separate white liquor from the lime mud. The white liquor is sent to the white liquor storage tanks and the lime mud is diluted in the lime mud mix tanks. Diluted lime mud passes through a mud washer filter where weak liquor is separated from the mud to be used as weak wash in the smelt tanks. The lime mud then enters the lime recovery cycle. The process involves using very high temperatures in the lime kilns to separate water and carbon dioxide from the lime mud in order to regenerate lime used in the slakers.

No. 1 Lime Kiln

The No. 1 Lime Kiln was installed in 1967, prior to the applicability date of the NSPS found in 40 CFR Part 60, Subpart BB. It is subject to the State particulate standard for Kraft Pulp Mills, as listed in 335-3-4-.07. It is also subject to the State Only TRS standard found in 335-3-5-.04. The unit is subject to the State opacity regulations found in 335-3-4-.01, but no monitoring is required because the unit is controlled with a scrubber.

The No. 1 Lime Kiln is subject to the MACT standard listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPs) limit of 0.36 gr/dscf is an approved alternative limit established under the provisions of §63.862(a)(1)(ii). It should be noted that the language in the permit states that the No. 1 Lime Kiln may be included in the Bubble allowed under §63.862(a)(1)(ii) regardless of the number of hours that it operates. This alternative was approved through the Equivalency by Permit (EBP) process outlined in §63.94. Approval was granted by EPA in a letter dated August 20, 2009.

On November 5, 2019, ADEM issued a significant modification to the Tile V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II requirements. The mill no longer burns fuel oil or reclaimed oil in the No. 1 Lime Kiln so it will be removed as permitted fuels at this time. Additionally, multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 1 Lime Kiln are controlled through use of a wet scrubber.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	1.0 lb/air dried ton of pulp	335-3-4-.07	Annual Stack Test and three hour average lime mud feed rate

Opacity	20%	335-3-4-.01	None (wet stack)
PM as a surrogate for HAPS	0.36 gr/dscf at 10% O ₂	40 CFR Part 63, Subpart MM	Continuous monitor on scrubber flow rate and pressure drop.
TRS	20 ppm at 10% O ₂	335-3-5-.04 (6) (State only)	Continuous emissions monitor

No. 2 Lime Kiln

The No. 2 Lime Kiln was installed in 1980 and is subject to the NSPS found in 40 CFR Part 60, Subpart BB, with appropriate limitations on PM and TRS emissions.

This unit received a synthetic minor for PSD emission limitation on SO₂ emissions. The unit is subject to the State opacity regulations found in 335-3-4-.01, but no monitoring was required because the unit is controlled with a scrubber.

The No. 2 Lime Kiln is subject to the MACT standard listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPs) limit of 0.1 gr/dscf is an approved alternative limit established under the provisions of §63.862(a)(1)(ii).

On November 5, 2019, ADEM issued a significant modification to the Title V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II and NSPS requirements. The mill no longer burns fuel oil or reclaimed oil in the No. 2 Lime Kiln so it will be removed as permitted fuels at this time. Additionally, multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 2 Lime Kiln are controlled through use of a wet scrubber. The No. 2 Lime Kiln is also used as a control device by incinerating LVHC gases.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM (petcoke)	0.13 gr/dscf or 42 lbs/hr	40 CFR Part 60, Subpart BB and 335-3-14-.04 (9)	Annual Stack Test/three hour average lime mud feed rate
PM (gas)	0.066 gr/dscf or 21 lbs/hr	40 CFR Part 60, Subpart BB and 335-3-14-.04 (9)	Annual Stack Test/three hour average lime mud feed rate
TRS	8 ppm at 8% O ₂	40 CFR Part 60, Subpart BB	Continuous emissions monitor
SO ₂	39 tons per year	335-3-14-.04 (9)	Petcoke vendor certification of sulfur content
Opacity	20%	335-3-4-.01	None (wet stack)
PM as a surrogate for HAPS	0.1 gr/dscf at 10% O ₂	40 CFR Part 63, Subpart MM	Continuous monitor on scrubber flow rate and pressure drop

Power Boilers

The Power Boiler area is used to generate and distribute steam and electricity for use throughout the mill. The Power Boiler area consists of the No. 1 Power Boiler, No. 2 Power Boiler, and the Coal and Petcoke System. The No. 1 Power Boiler supplies nominal 900 psig steam to a steam header and the No. 1 Turbine Generator. The No. 2 Power Boiler supplies nominal 1500 psig steam to the steam header and the No. 2 Turbine Generator.

No. 1 Power Boiler

The No. 1 Power Boiler was installed in 1967 prior to the applicability dates of the NSPSs found in 40 CFR Part 60, Subparts D, Da, or Db.

The No. 1 Power Boiler is subject to the MACT standard listed in 40 CFR Part 63, Subpart DDDDD–Boiler MACT, as an existing source, hybrid suspension grate biomass boiler. As part of the third renewal, provisos were added to clarify Boiler MACT requirements.

The boiler is subject to the State’s particulate emission limitations found in 335-3-4-.03 for fuel burning equipment. The unit is subject to the State opacity regulations found in 335-3-4-.01, but no monitoring was required because the unit is controlled with a wet ESP.

The No. 1 Power Boiler is subject to a National Ambient Air Quality Standard (NAAQS) limit for sulfur dioxide. Fuel monitoring requirements to demonstrate ongoing compliance with SO₂ were added during this renewal.

The boiler is subject to the State’s NO_x Budget Program that became effective on April 13, 2020, found in 335-3-8-.71 and 335-3-8-.72. The requirements of the NO_x Budget Program will be incorporated as part of the third renewal.

The mill no longer burns fuel oil or used oil in the No. 1 Power Boiler and will be removed as permitted fuels at this time. Additionally, multiple administrative changes were made to this section.

Control Equipment

Pollution control equipment on the No. 1 Power Boiler includes a cyclone separator followed by a wet electrostatic precipitator. The boiler is also used as a control device for incineration of LVHC gases, HVLC gases, and stripper off gases.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
Particulate Matter	0.12 lb/MMBtu	335-3-4-.03 335-3-14-.04	Annual test and three-hour average steaming rate
SO ₂	900 lb/hr	335-3-14-.04	Sulfur content of fuel monitoring
Opacity	20%	335-3-4-.01	
Filterable PM	0.44 lb/MMBtu (0.55 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack Testing and continuous monitoring

CO	3,500 ppm by volume on a dry basis corrected to 3% oxygen, or 3.5 lb/MMBtu of steam output, on a 3- hour average	40 CFR Part 63, Subpart DDDDD	Stack Testing and continuous monitoring
HCl	0.022 lb/MMBtu (0.025 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack testing, continuous monitoring, and fuel monitoring
Hg	5.7E-06 lb/MMBtu (6.4E-06 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack testing, continuous monitoring, and fuel monitoring

No. 2 Power Boiler

The No. 2 Power Boiler was installed in 1980 and is subject to the NSPS found in 40 CFR Part 60, Subpart D, and has limitations for PM, SO₂, NO_x, and Opacity. The mill increased the natural gas firing capabilities in 2016 and removed the ability to burn fuel oil. As a result, fuel oil and used oil will be removed as permitted fuels at this time. NO_x fuel specific limits of Subpart D and quarterly excess emissions reporting requirements were added as part of this renewal. Additionally, multiple administrative changes were made to this section.

The No. 2 Power Boiler is subject to the MACT standard listed in 40 CFR Part 63, Subpart DDDDD–Boiler MACT, as an existing source, hybrid suspension grate biomass boiler. As part of the third renewal, provisos were added to clarify Boiler MACT requirements.

The boiler is subject to Prevention of Significant Deterioration Best Available Control Technology limits of ADEM Admin. Code R. 335-3-14-.04 for PM, NO_x, Opacity, and SO₂.

The boiler is subject to the State’s NO_x Budget Program that became effective on April 13, 2020, found in 335-3-8-.71 and 335-3-8-.72. The requirements of the NO_x Budget Program will be incorporated as part of the third renewal.

Control Equipment

Pollution control equipment on the No. 2 Power Boiler includes a two-chamber electrostatic precipitator. The boiler is also used as a control device for incineration of HVLC gases and stripper off gases.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	0.10 lbs/mmbtu or 61 lbs/hr	40 CFR Part 60, Subpart D and 334-3-14-.04	Annual test and three-hour average steaming rate
SO ₂	1.2 lbs/mmbtu or 572 lbs/hr	40 CFR Part 60, Subpart D and 334-3-14-.04	Monitoring of sulfur content in fuel
NO _x	0.70 lbs/mmbtu or 427 lbs/hr	40 CFR Part 60, Subpart D and 334-3-14-.04	Continuous emissions monitor
Opacity	20%	40 CFR Part 60, Subpart D and 334-3-14-.04	Continuous opacity monitor

Filterable PM	0.44 lb/MMBtu (0.55 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack Testing and continuous monitoring
CO	3,500 ppm by volume on a dry basis corrected to 3% oxygen, or 3.5 lb/MMBtu of steam output, on a 3- hour average	40 CFR Part 63, Subpart DDDDD	Stack Testing and continuous monitoring
HCl	0.022 lb/MMBtu (0.025 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack testing, continuous monitoring, and fuel monitoring
Hg	5.7E-06 lb/MMBtu (6.4E-06 lb/MMBtu of steam output)	40 CFR Part 63, Subpart DDDDD	Stack testing, continuous monitoring, and fuel monitoring

Pet Coke and Coal Unloading, Crushing and Storage

The Pet Coke and Coal areas are used for unloading, storage, and conveying of the fuels prior to firing. The coal unloading, crushing, and storage sources are subject to the NSPS in 40 CFR Part 60, Subpart Y. The pet coke unloading, crushing, and storage sources are subject to state only requirements. As part of the third renewal, references to the NSPS will be removed for the pet coke processing sources as petroleum coke is not covered under Subpart Y. For monitoring of both units, daily opacity checks are required when the units are in operation. In 2015, pollution control equipment was added to the pet coke sources.

Control Equipment

Emissions from the Pet Coke system are controlled through a baghouse, bin vent, and densi-filter.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
Opacity	20%	40 CFR Part 60, Subpart Y and/or 335-3-14-.04	Daily opacity checks

Recovery Area

The purpose of the Recovery Area is to burn recovered black liquor in order to generate steam and reduce spent pulping chemicals to molten smelt. As black liquor is burned in the recovery furnaces, steam is generated for distribution in the mill's steam headers and the reduced inorganic chemicals flow by gravity from the recovery furnace to the smelt dissolving tanks. The molten smelt is combined with weak wash to form green liquor. The green liquor is then processed in the Caustic Area for regenerating white liquor. The Recovery Area consists of the No. 1 Recovery Furnace, No. 1 Smelt Tank, No. 2 Recovery Furnace, and the No. 2 Smelt Tank.

No. 1 Recovery Furnace

The No. 1 Recovery Furnace was constructed in 1967, prior to the applicability date listed in 40 CFR Part 60, Subpart BB. The unit is subject to the state regulations for PM and TRS emissions.

The recovery furnace is subject to the opacity and PM limits listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPs) limit of 0.023 gr/dscf is an approved alternative limit established under the provisions of §63.862(a)(1)(ii).

On November 5, 2019, ADEM issued a significant modification to the Tile V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II requirements. The mill no longer burns No. 6 fuel oil in the No. 1 Recovery Furnace so it will be removed as a permitted fuel at this time. Additionally, multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 1 Recovery Furnace are controlled through use of a dual chamber precipitator.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	1.11 lb/air dried ton of pulp or 60 lbs/hr	335-3-4-.07 (5) and 335-3-14-.04 (9)	Annual test and three hour black liquor firing rate
TRS	20 ppm corrected to 8% O ₂	335-3-5-.04 and 335-3-14-.04 (9)	Continuous emissions monitor
Opacity	35%	40 CFR Part 63, Subpart MM	Continuous opacity monitor
PM as a surrogate for HAPS	0.023 gr/dscf at 8% O ₂	40 CFR Part 63, Subpart MM	Continuous opacity monitor and 5-year performance test

No. 1 Smelt Dissolving Tank

The No. 1 Smelt Dissolving Tank was constructed in 1967, prior to the applicability date listed in 40 CFR Part 60, Subpart BB. The unit is subject to the state regulations for PM and TRS emissions.

The unit is subject to the State opacity regulations found in 335-3-4-.01, but no monitoring was required because the unit is controlled with a scrubber.

The No. 1 Smelt Dissolving Tank is subject to the limits listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPs) limit of 0.25 lbs/ton of BLS is an approved alternative limit established under the provisions of §63.862(a)(1)(ii).

On November 5, 2019, ADEM issued a significant modification to the Tile V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II requirements and multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 1 Smelt Dissolving Tank are controlled through use of a wet scrubber.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	0.5 lbs/air dried ton of pulp	335-3-4-.07	Annual test and three hour black liquor firing rate
TRS	0.033 lb/ton of black liquor	335-3-5-.04 (State only)	Continuous monitor on dilute caustic recirculation flow rate and 5-year performance test
Opacity	20%	335-3-4-.01	None (wet stack)
PM as a surrogate for HAPS (Stack 1)	0.25 lbs/ton of black liquor (Stack 1)	40 CFR Part 63, Subpart MM	Continuous monitor on scrubber flow rate and pressure drop and 5-year performance test
PM as a surrogate for HAPS (Stack 2)	0.25 lbs/ton of black liquor (Stack 2)	40 CFR Part 63, Subpart MM	Continuous monitor on scrubber flow rate and pressure drop and 5-year performance test

No. 2 Recovery Furnace

The No. 2 Recovery Furnace was installed in 1980 and is subject to the PM and TRS NSPS limits found in 40 CFR Part 60, Subpart BB.

The recovery furnace has a BACT limit of 250 ppm or 482 lbs/hr for SO₂.

The recovery furnace is subject to the opacity and PM limits listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPs) limit of 0.024 gr/dscf (stack 1) and 0.024 gr/dscf (stack 2) is an approved alternative limit established under the provisions of §63.862(a)(1)(ii).

On November 5, 2019, ADEM issued a significant modification to the Tile V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II and NSPS requirements. The mill no longer burns No. 6 fuel oil in the No. 2 Recovery Furnace so it will be removed as a permitted fuel at this time. Additionally, multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 2 Recovery Furnace are controlled through use of an electrostatic precipitator.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	0.044 gr/dscf at 8% O ₂ or 73 lbs/hr	40 CFR Part 60, Subpart BB	Annual test and three hour black liquor firing rate
TRS	5 ppm at 8% O ₂ or 7 lbs/hr	40 CFR Part 60, Subpart BB	Continuous emission monitor
SO ₂	250 ppm at 8% O ₂ or 482 lbs/hr	335-3-14-.04	Once per 5 years test and three hour black liquor firing rate
Opacity	35%	40 CFR Part 63, Subpart MM	Continuous opacity monitor

PM as a surrogate for HAPS	0.024 gr/dscf at 8% O ₂ (Stack 1)	40 CFR Part 63, Subpart MM	Continuous opacity monitor and 5-year performance test
PM as a surrogate for HAPS	0.024 gr/dscf at 8% O ₂ (Stack 2)	40 CFR Part 63, Subpart MM	Continuous opacity monitor and 5-year performance test

No. 2 Smelt Dissolving Tank

The No. 2 Smelt Dissolving Tank was installed in 1980 and is subject to the PM and TRS NSPS limitations found in 40 CFR Part 60, Subpart BB.

The unit is subject to the State opacity regulations found in 335-3-4-.01, but no monitoring was required because the unit is controlled with a scrubber.

The No. 2 Smelt Dissolving Tank is subject to the limits listed in 40 CFR Part 63, Subpart MM. The PM (as a surrogate for HAPS) limit of 0.19 lbs/ton of BLS is an approved alternative limit established under the provisions of §63.862(a)(1)(ii).

On November 5, 2019, ADEM issued a significant modification to the Title V permit to incorporate the MACT II amendments published on October 11, 2017. As part of the third renewal, provisos were added to clarify MACT II and multiple administrative changes were made to this section.

Control Equipment

Emissions from the No. 2 Smelt Dissolving Tank are controlled through use of a venturi wet scrubber.

Emission Standards

Pollutants	Limitation	Regulations	Monitoring
PM	0.2 lbs/ton black liquor solids or 16 lbs/hr	40 CFR Part 60, Subpart BB and 335-3-14-.04 (9)	Annual test and three hour black liquor firing rate
TRS	0.033 lb/ton black liquor solids or 2.6 lbs/hr	40 CFR Part 60, Subpart BB and 335-3-14-.04 (9)	Three hour scrubber flow rate
Opacity	20%	335-3-4-.01	None (wet stack)
PM as a surrogate for HAPS	0.19 lbs/ton black liquor solids	40 CFR Part 63, Subpart MM	Three hour scrubber flow rate and fan amps and 5-year performance test

Paper Machine Area

The Paper Machine area is used to produce unbleached linerboard from virgin kraft pulp and recycled old corrugated container material. The area consists of the No. 1 and 2 Paper Machines. International Paper produces various grades (weights) of linerboard and the No. 2 Paper Machine is also used to produce corrugating medium. The paper making process begins by preparing the stock by mixing different grades of pulp needed for the various products. The stock is then refined to create fiber-to-fiber bonds and adjusted to meet the desired stock consistency. Following the stock preparation, various chemicals are added to aid in linerboard formation by making the fibers less absorbent to water

and to maintain the paper quality. Defoamers are also added to increase water drainage during the linerboard formation. Next, the pulp stock is distributed through the head box onto a forming sheet made of mesh or screen. Water drains from the pulp stock through the screen and is further dried in the fourdrinier section with vacuum pumps. Approximately 98% of the water has been removed from the pulp stock by the end of the forming section. Following the forming section, the fiber mat is pressed between two press rolls squeezing out additional water. The product is then dried in the dryer section before being wound onto reels. The reels are cut down into appropriate sizes and processed for shipment to customers.

Paper Machine 1

The No. 1 Paper Machine was originally installed in 1967. As part of a Best Available Control Technology (BACT) limit, VOC compound emissions shall be controlled by using only mill supply water, non-direct contact condensates, clean condensates, and well water or white water as water sources for the paper machine. Since the paper machines have no specific limits, no periodic monitoring is necessary. In 1999, the mill went through a mill wide PSD “stretch” project resulting in incremental increases in linerboard production.

Pollutants	Limitation	Regulations	Monitoring
VOCs	Clean Water	335-3-14-.04	Work Practice Standard

Paper Machine 2

The No. 2 Paper Machine was originally installed in 1980. As part of a Best Available Control Technology (BACT) limit, VOC compound emissions shall be controlled by using only mill supply water, non-direct contact condensates, clean condensates, and well water or white water as water sources for the paper machine. In 1999, the mill went through a mill wide PSD “stretch” project resulting in incremental increases in linerboard production. In 2015 – 2016 the mill implemented upgrades to increase efficiency, reliability, and production for the No. 2 Paper Machine. To demonstrate emissions of the project remain below PSD significance levels, the mill is required to track emissions for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, and VOC through the year 2021. Since the paper machines have no specific limits, no additional periodic monitoring is necessary.

Pollutants	Limitation	Regulations	Monitoring
VOCs	Clean Water	335-3-14-.04	Work Practice Standard

Rice Units

The Prattville Mill has 4 stationary Reciprocating Internal Combustion Engines (RICE) units that provide power or water to different areas of the Mill. As part of the third renewal, provisos referencing 40 CFR Part 63 Subpart ZZZZ were removed as these requirements are met by meeting the requirements of 40 CFR Part 60 Subpart IIII.

These units are identified and described by the following:

Unit #	Installation	Description	Capacity	Fuel	Emergency?
LK1	2012	No. 1 Lime Kiln Auxiliary Drive	46 hp	Diesel	Non-emergency
LK2	2015	No. 2 Lime Kiln Auxiliary Drive	46 hp	Diesel	Non-emergency

FP1	2016	No.1 Fire Pump	305 hp	Diesel	Emergency
FP2	2019	No. 2 Fire Pump	305 hp	Diesel	Emergency

All units are subject to the State opacity regulations found in 335-3-4-.01.

All units are subject to 40 CFR 60 Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines. Operating hours for the LK1 and LK2 non-emergency engines are not limited for any purposes. For the FP1 and FP2 emergency engines, the facility is required to record emergency and non-emergency use through a non-resettable hour meter. Additionally, the units are subject to the following emission standards:

Unit #	Pollutant	Emission Limit	Regulation
LK1, LK2	HAPs	Comply with 40 CFR 60.4204(b) which reference CFR 89.112, specifically: Max Engine Power : $19 \leq kW < 37$ (Tier 2) Emission Standards (g/kW-hr) NMHC+ NOx : 7.5(5.59 g/hp-hr) CO: 5.5 (4.10 g/hp-hr) PM: 0.60 (0.45 g/hp-hr)	40 CFR 60.4204
FP1, FP2	HAPs	NMHC + NOx: 3.0 g/hp-hr CO: 2.6 g/hp-hr PM: 0.15 g/hp-hr	40 CFR 60.4205

MACT I Sources

Pulping System Processes

LVHC gases from the digesters, evaporators, turpentine recovery, and condensate stripper system, must be collected and incinerated in either the No. 1 Power Boiler, No. 2 Power Boiler, or No. 2 Lime Kiln. HVLC gases from the knotter or screen systems, pulp washing systems, and decker systems, must be collected and incinerated in either the No. 1 Power Boiler or No. 2 Power Boiler. The gases must be conveyed in a system that meets the requirements of §63.450.

Control Equipment

The LVHC and HVLC gases are controlled through incineration.

Emission Standards

These sources are subject to the MACT regulations found in 40 CFR Part 63, Subpart S.

Pollutants	Limitation	Regulations	Monitoring
HAPs (LVHC)	Incineration	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
HAPs (HVLC)	Incineration	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
HAPs LVHC	Leak Detection and Repair	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S

Process Condensates

Process condensates from the digesters, turpentine recovery system, evaporators, LVHC collection system, and HVLC collection system that in total contain a HAP mass of 7.2 pounds per ton of ODP, shall be collected and treated to reduce or destroy the total HAP content by at least 92%. The condensates must be conveyed in a system that meets the requirements of §63.446 and §63.450.

Control Equipment

Process Condensates are controlled through treatment in the Condensate Stripper by reducing total HAPs per ton of ODP by at least 92% at the outlet.

Emission Standards

These sources are subject to the MACT regulations found in 40 CFR Part 63, Subpart S.

Pollutants	Limitation	Regulations	Monitoring
HAPs	Collect at least 7.2 lbs of HAP per ton of Oven Dried Pulp, then reduce by 92%	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
HAPs	Condensates shall be conveyed by closed collection system	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S
HAPs	Leak Detection and Repair	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S

Enclosures and Closed-Vent Systems

The Enclosures and Closed-Vent Systems serves to enclose and transport LVHC and HVLC gases and process condensates to their corresponding control devices. The system is subject to the requirements found in §63.450.

Emission Standards

These sources are subject to the MACT regulations found in 40 CFR Part 63, Subpart S.

Pollutants	Limitation	Regulations	Monitoring
HAPs	Leak Detection and Repair	40 CFR Part 63, Subpart S	As required by 40 CFR Part 63, Subpart S

Sources subject only to General Provisos

These are sources that are subject only to the General Provisos, but do not qualify for the Trivial and Insignificant list. No specific limitations or monitoring apply.

Effluent Treatment System
Pulp Storage Tanks
Liquor Storage Tanks
Precoat Filters
Pressure Filters
Tall Oil Plant

CAM

CAM applies to pollutant specific emission units that are subject to an emission limitation or standard where a control device is used to achieve compliance with an applicable emission limitation. The CAM rule requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations.

These are the exemptions that apply to one or more emission units operated by the mill:

- The requirements of Part 64 shall not apply to emission limitations or standards proposed by EPA after November 15, 1990, pursuant to section 111 or 112 of the Clean Air Act (40 CFR 64.2(b)(1)(i));
- The requirements of Part 64 shall not apply to Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions within a source or between sources;
- The requirements of Part 64 shall not apply to emission limitations or standards for backup utility power units that: are owned by a municipality, are exempt from all monitoring requirements in Part 75, are operated solely for providing electricity during peak periods or emergency situations, and for which average actual emission for the previous 3 years are less than 50 percent of the major source cutoff and are expected to remain so; and
- The requirements of Part 64 shall not apply to emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method (40 CFR 64.2(b)(1)(vi)).

For the units that are subject to CAM, the Title V Permit currently requires continuous monitoring, which satisfies the CAM rule that requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations.



Steven Bissey
Industrial Chemicals Section
Chemical Branch
Air Division

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