PRELIMINARY DETERMINATION
New South Lumber, LLC
Bucks Sawmill
Facility No. 503-S002

Introduction

On August 23, 2023, Trinity Consultants submitted, on behalf of New South Lumber Company (NSLC), a Prevention of Significant Deterioration (PSD) permit application. In the application, NSLC proposes to construct a new sawmill facility at a Greenfield site in Mobile County, Alabama. Application addenda were received on October 16, November 13, and December 4, 2023, and January 22, and February 6, 2024. Once the construction is completed, the facility would have the capability of producing 240 MMBF of kiln dried lumber per year. Air Permit Nos. X001 through X005 would be issued for the proposed sawmill pending the resolution of any comments that may be received during the public comment period and EPA review.

Proposed Project

The proposed sawmill would be constructed in Mobile County at 14083 U.S. 43 in Bucks. Processes at the facility would consist of a debarker, a sawmill, a sawdust storage system with two (2) storage silos and cyclones (SC01 and SC02), two (2) 70 MMBF/yr continuous lumber drying kilns (CDK1 and CDK2) each with a 40 MMBtu/hr wood-fired burner, a 100 MMBF/yr CDK (CDK3) with a 45 MMBtu/hr natural gas-fired burner, a planer mill with a quad pack cyclone (PLN1-QPC) and a high efficiency cyclone to a truck bin (PLN2-HEC), a 700 BHP emergency fire pump engine and three (3) 750 BHP emergency generators. The facility would also utilize a 700-gallon diesel and a 350-gallon gasoline storage tank to store fuel for mobile equipment used on site.

Tree length logs would be delivered by truck to the mill and off-loaded by cranes. The logs would be sorted, stacked, and inventoried for processing or placed on wet deck storage. Once entering processing, logs would be cut to the desired length by saws, and manually fed into a debarker. The logs would then be scanned for metal to prevent damage to processing equipment and to reduce the possibility of personnel injury. Bark and wood chips would be mechanically conveyed to storage bins before being sold off-site as a byproduct. Poor quality log parts would be chipped and sold as a paper mill fiber source or distributed for other purposes.

Logs entering the sawmill building would be converted into various sized green timbers or dimensional lumber using a series of sawing techniques. Dimension lumber and timbers would be sawed, trimmed at the green trimmer, sorted by length and dimension, stacked on sticks, and sold as rough green lumber or sent to the lumber kilns for drying. Large defective pieces from the sawmill would be chipped and sold as a byproduct or distributed for other purposes. Green sawdust from this process would be collected and pneumatically conveyed to one of two fuel storage silos for the biomass-fired kilns. Emissions would be controlled by individual cyclones on each fuel silo.

Packs of lumber from the sawmill area would be stacked onto carts, which would then be pushed on rail tracks into one of three lumber drying kilns. In the lumber drying area, packs of green lumber would be heated to dry the lumber to a moisture content between 15-20%. The facility would operate two, direct-fired biomass continuous kilns (CDK1, CDK2) and one direct-fired natural gas continuous kiln (CDK3). The biomass kilns would each have a 40 Million British Thermal Unit per hour (MMBtu/hr) burner and a maximum capacity of 70 million board feet

(MMBF) annually. The natural gas kiln would be equipped with a 45 MMBtu/hr burner and have a maximum capacity of 100 MMBF annually. Emissions from the kilns would be directed through powered stacks at the end of each kiln.

Dried rough lumber would be sent from the lumber kilns to be finished in the planer mill. Each board would be passed through a planer to dress the surface and finish the board to its final thickness and width. Dry shavings from the planer mill would be collected and pneumatically conveyed via a quad pack cyclone and high efficiency cyclone to a truck bin and stored until sold and loaded into trucks. After planing, each board would be grade stamped and packaged for shipping. The finished product would then be stored in inventory or loaded and shipped off-site.

NSLC proposes to install a 700-hp natural gas-fired emergency fire pump engine (ENG1) and three (3) 750-hp natural gas-fired emergency generators (GEN1, GEN2, GEN3) at the sawmill. The facility proposes an annual limit of 500 hours of operation for each engine/generator.

Applicability: Federal Regulations

Title V

Upon completion of construction, this facility would be considered a major source under Title V regulations because the potential emissions of volatile organic compounds (572.8 TPY of VOC) would exceed the 100 ton per year (TPY) major source threshold. It would also be a major source of hazardous air pollutants (HAPs) because the potential emissions of methanol would be greater than 10 TPY (20.7 TPY of Methanol) and the potential emissions for combined HAP would exceed 25 TPY (36.8 TPY of total HAP).

National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP requires that any facility regulated under section 112 of the Clean Air Act whose potential emission of hazardous air pollutants (HAPs) exceeds the major source threshold, unless the source is a specifically designated area source, must control these emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions under 40 CFR Part 63. NSLC would be a major source for HAPs and an affected source under 40 CFR Part 63, Subpart DDDD: *Plywood and Composite Wood Products* (PCWP MACT), and 40 CFR Part 63, Subpart ZZZZ: *Stationary Reciprocating Internal Combustion Engines* (RICE MACT).

PCWP MACT

The PCWP MACT regulates HAP emissions from activities associated with the manufacture of plywood and other composite wood products, including stand-alone lumber kilns, in accordance with 40 CFR §63.2232. Processes that are not subject to the compliance options or work practice requirements specified in 40 CFR §63.2240, such as the lumber kilns, are specifically not required to comply with the compliance options, work practice requirements, performance testing, monitoring, and recordkeeping or reporting requirements of the subpart, or any other requirements in 40 CFR 63 Subpart A, except the initial notification requirements in 40 CFR §63.9(b) in accordance with 40 CFR §63.2252. The application serves as the initial notification of the intention to construct three CDKs, affected sources under PCWP MACT.

RICE MACT

The fire pump engine and emergency generators would be affected sources under the RICE MACT. The engines would be classified as new sources because the installation dates would be after December 19, 2002. According to 40 CFR §63.6590(b)(1)(i), a new or reconstructed emergency engine with a site rating greater than 500 HP at a major source of HAP emissions does not need to comply with any requirements under Subpart ZZZZ other than submittal of an initial notification. The application would serve as an initial notification under the subpart.

New Source Pollutant Standards (NSPS)

40 CFR Part 60, Subpart JJJJ, *NSPS for Stationary Spark Ignition Internal Combustion Engines*, applies to owners/operators of stationary spark ignition (SI) ICE that commence construction after June 12, 2006, and for emergency engines with a maximum engine power greater than 19KW (25Hp) if the stationary SI ICE are manufactured on or after January 1, 2009. The fire pump engine and emergency generators would be subject to 40 CFR 60 Subpart JJJJ. According to 40 CFR §60.4233(e), owners and operators of natural gas-fired SI ICE with a maximum engine power greater than 100 HP must comply with the following emission standards in Table 1 to the subpart:

g/HP-hr			ppmvd @ 15% O_2		
NOx	CO	VOC	NOx	CO	VOC
2.0	4.0	1.0	160	540	86

Compliance

To demonstrate compliance with the emission limitations, NSLC would purchase engines certified to meet the emission standards in accordance with 40 CFR §60.4243(b)(1). The facility would operate and maintain the engines in accordance with the requirements of 40 CFR §60.4243(a)(1). The engines would be equipped with a non-resettable hour meter as required by 40 CFR §60.4237(a). The NSPS limits the operation of the engines to emergency situations and 100 hours per year for maintenance checks, readiness testing, and demand response as specified in 40 CFR §60.4243(d). In accordance with 40 CFR §60.4243(d)(3) emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. If the facility operates an emergency engine for the purpose specified in §60.4243(d)(3)(i), they must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of 40 CFR §60.4245.

In accordance with 40 CFR §60.4234 the facility would be required to operate and maintain the engines as required by 40 CFR §60.4233 over the entire life of the engine. The facility must also comply with the General Provisions outlined in Table 3 to Subpart JJJJ as required by 40 CFR §60.4246. The facility would be allowed to operate the engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergencies in accordance with 40 CFR §60.4243(e).

Recordkeeping
In accordance with 40 CFR §60.4245(a) and (b), NSLC would maintain the following records:

- Documentation from the manufacturer that the engines are certified to meet the emission standards;
- The date, time, duration, and purpose of operation each time an emergency engine is operated and;
- Records of all maintenance performed.

All records would be maintained in a form suitable for inspection and retained for a period of two years from the date of generation, as required by 40 CFR §60.7(f).

Testing Requirements
Operators who do not purchase a certified engine must conduct an initial performance test (in accordance with 40 CFR §60.4244) within one year of engine startup and conduct subsequent performance testing every 8,760 hours or three years, whichever comes first, thereafter to demonstrate compliance with 40 CFR §60.4243(a)(2)(iii). As NSLC would purchase a certified engine, no testing would be required.

Prevention of Significant Deterioration (PSD)
The proposed facility would be located in Mobile County which is currently classified as an attainment area for all criteria pollutants. NSLC would not be one of the 28 Major Source categories listed in ADEM Admin. Code r. 335-3-14-.04(2)(a)(1); therefore, the major source threshold of concern is 250 TPY for criteria pollutants. This facility would be considered a new major stationary source under PSD regulations because the potential emissions of VOC (572.8 TPY) from the proposed facility would exceed 250 TPY, and the potential emissions of CO_{2e} (97,077 TPY) would exceed the applicable significant emissions rate of 75,000 TPY. To avoid triggering PSD significance levels for PM, PM10, and PM2.5, the facility has requested synthetic minor, federally enforceable limits for each applicable unit.

A major source or major modification (one subject to PSD) must be constructed with Best Available Control Technology (BACT) and must have its effect on soils, vegetation, visibility, and ambient air quality addressed for each applicable pollutant. Applicability is determined by comparing each regulated pollutant's potential emission increase to its significant increase value. NSLC calculated the maximum pollutant emissions based on future potential annual emissions (shown in the following table).

Emissions Summary (TPY)

Potential Emissions (TPY)	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NOx**	**VOC**	**SO_2**	**CO_{2e}**
Fuel Silo Cyclones	8.56	0.08	0.08					
Planer Mill Cyclones	5.36	0.08	0.08					
Dry Kilns	10.9	9.85	9.51	46.61	28.98	571.13	8.88	96,508
Emergency Engines	0.0	0.0	0.0	6.49	3.26	1.62	0.0	568.4
Fuel Storage Tanks	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0
Total Proposed Emissions (TPY)	24.82	10.01	9.67	53.1	32.2	572.79	8.88	97,077
PSD Significant Emission Rate (TPY)	25	15	10	100	40	40	40	75,000
PSD Triggered?	No	No	No	No	No	Yes	No	Yes

Sources subject to PSD must satisfy the following requirements before being allowed to initiate construction:

1. Provide opportunity for public participation in the permitting process relative to the air quality impact the source would have if it were built.
2. Obtain a permit which sets forth emission limitations.
3. Demonstrate that the emissions from the source would not cause or contribute to a violation of the PSD increment or the NAAQS.
4. Apply the best available control technology (BACT), which is defined in terms of an emission limitation, based on the maximum degree of reduction of each pollutant which is determined to be technically and economically achievable for that particular source.
5. Analyze the impairment to visibility, soils, and vegetation that might occur as a result of operation of the source.
6. Analyze the air quality impacts projected due to the growth associated with the facility.
7. Conduct any ambient air quality monitoring necessary to determine the effect of the emissions on air quality.

Public Participation

In order to satisfy the public participation requirement, a copy of the preliminary determination (this engineering analysis and the air quality dispersion modeling analysis) and the permit applications will be made available on the Department's website for at least 30 days of public review. After the 30-day public comment period and within 5 days of the PSD permit issuance, the final determination will be made available on the Department's eFile system. The final determination consists of copies of the signed permits, any comments received during the public comment period, and any responses made to those comments.

BACT Determination

During a PSD review, new and modified sources must be assessed for Best Available Control Technology, or BACT, if their potential emissions increase is significant. BACT is an emission limit based on the maximum pollutant reduction achievable considering energy, economic, and environmental impacts. BACT is determined on a unit by unit, pollutant by pollutant basis. The BACT limit can be no less stringent than any applicable New Source Performance Standard (NSPS), National Emission Standard for Hazardous Air Pollutants (NESHAP), or other applicable standard.

For the proposed project, BACT must be determined for VOC and CO_{2e} emissions from the continuous lumber drying kilns and engines. NSLC utilized the "top-down" approach for the BACT analysis. This approach considers the most stringent control option available and a determination of its technical feasibility for the emission unit in question. If the option is not rejected, the applicant must analyze the option based upon economic, environmental, and energy considerations. Below are the five basic steps of a top-down BACT review procedure as identified by the US EPA in the March 15, 1990, Draft BACT Guidelines:

Step 1. Identify all control technologies
Step 2. Eliminate technically infeasible options
Step 3. Rank remaining control technologies by control effectiveness
Step 4. Evaluate most effective controls and document results
Step 5. Select BACT

Best Available Control Technology (BACT)

BACT is determined on a unit by unit, pollutant by pollutant basis. Because the PSD application submitted by NSLC addresses new emissions units, BACT would be performed for all applicable units. The proposed available control technologies for the units at NSLC are listed in Table II.

TABLE I
AVAILABLE CONTROL TECHNOLOGIES

Pollutant	Control Technology
VOC	Thermal Oxidation, Condensation, Adsorption, Wet Scrubbing, Biofiltration, Good Design/Operation
CO_{2e}	Fuel Selection, Good Design/Operation

The facility proposes the following as BACT for each applicable unit:

Table II
Summary of Proposed BACT

Unit	Pollutant	Selected BACT	Limits (Each Unit)	Compliance Method
Continuous Kilns	VOC	Proper Maintenance and Operating Practices	4.75 lb/MBF (All kilns)	Recordkeeping
	GHG	Optimum Combustion Fuel Selection Good Design and Operating Practices	Rolling 12-month basis 36,714 tpy (Biomass) 23,080 tpy (Natural gas)	Recordkeeping
Emergency Engines	VOC	Good Combustion Practices Limiting Operating Hours	1.0 g/HP-hr	Recordkeeping
	GHG	Optimum Combustion Fuel Selection Good Design and Operating Practices	144.5 TPY (Generators) 134.9 TPY (Fire Pump)	Recordkeeping

Continuous Dry Kilns
BACT Determination for VOC

Steps 1 and 2. Identify all control technologies and the feasibility of each: NSLC examined the feasibility of the following control technologies to control VOC emissions:

- Adsorption
- Biofiltration
- Condensation
- Thermal Oxidation
- Wet Scrubbing
- Proper Maintenance and Operation.

Adsorption

Carbon adsorption systems can potentially be used to remove VOCs from exhaust gases. The system funnels VOC laden gases through an activated carbon bed contained in a steel vessel. The gaseous VOCs are adsorbed on the activated carbon while the clean gas is vented to the atmosphere. Spent carbon is regenerated with steam by replacing adsorbed organic compounds at high temperatures. Carbon adsorption systems have demonstrated VOC reduction efficiencies of approximately 90 to 95 percent.

Carbon adsorption is not recommended for exhaust streams with 50 percent or greater relative humidity. At high moisture content, water molecules compete with the hydrocarbon molecules by preferentially condensing on active adsorption sites substantially reducing the efficiency of control. The exhaust from lumber dry kilns contains water vapor that has a relative humidity over 100%. Carbon adsorption is therefore considered technically infeasible in this application. There are currently no identified lumber drying kilns equipped with carbon adsorption systems.

Biofiltration

Biofiltration is a control technology in which vapor-phase organic contaminants are passed through a filter bed. The contaminants are absorbed on the filter material and are then broken down by microorganisms. The compounds transform into CO_2 and H_2O with varying efficiency.

To maintain high removal efficiencies moisture levels, pH, temperature, and other filter conditions such as fungi growth should be monitored. Most microorganisms can survive and flourish at temperatures of 60°F to 105°F. The exiting exhaust temperature of the proposed lumber kilns would be approximately 145 °F. VOC emissions from the kilns are also primarily terpenes that are highly viscous and would foul the biofilter. The application of biofiltration technology for VOC removal from lumber kiln emissions has not been demonstrated. Due to the temperature constraints and unproven application of biofiltration to this type of process, biofiltration is technically infeasible for the proposed lumber drying kilns.

Condensation

Condensation removes contaminants by chilling the exhaust streams, converting it into a liquid. The two most common types of condensation devices are contact or barometric condensers and surface condensers.

Condensation is only effective when the gas stream can be cooled to a temperature where VOC constituents condense as a liquid out of the gas stream. To reduce the vapor pressure of terpenes, the primary constituent of lumber kiln emissions, the temperature must be reduced to well below 0 ^{o}F. This temperature would freeze the exhaust stream and plug the unit. Condensation is considered technically infeasible in this application.

Thermal Oxidation

Regenerative Thermal Oxidation

According to EPA Air Pollution Control Technology, RTOs use a high-density media, such as a ceramic-packed bed, to preheat an incoming VOC-laden waste gas stream. The preheated gases then pass into a combustion chamber where they are heated by auxiliary fuel (natural gas) combustion to a final oxidation temperature typically between 1400 - 1500°F to achieve maximum VOC destruction. Purified hot gases exit this chamber and are directed to one or more different ceramic-packed beds cooled by an earlier cycle. Heat from the purified gases is absorbed by these before the gases are exhausted to atmosphere. The reheated packed bed then begins a new cycle by heating a new incoming waste gas stream. Destruction efficiency VOC depends upon the design criteria (i.e. chamber temperature, residence time, inlet VOC concentration, compound type, and degree of mixing). Typical VOC destructive efficiencies range from 95% to 99% for RTO systems. Lower control efficiencies are generally associated with lower concentration flows.

Regenerative Catalytic Oxidation

An RCO operates in the same manner as an RTO but uses a catalyst material rather than ceramic material in the packed bed that allows for destruction of VOC at a lower temperature. An RCO uses a precious metal catalyst in the packed bed, allowing oxidation to occur at approximately 800°F. The lower temperature requirement reduces the amount of natural gas needed to fuel the system and overall size of the incinerator. Destruction efficiencies range from 90 to 99% for RCO systems.

The high moisture content and low exit temperature of the kiln exhaust stream would likely make a Regenerative Thermal Oxidizer (RTO) technically infeasible. While regenerative catalytic oxidizers (CatOx) can operate at lower temperatures than the RTO, the exit temperature of the exhaust stream from the kiln is still too low for this option to be feasible. Furthermore, the particulate matter and other contaminants in the exhaust stream would cause a loss of catalytic activity. Also, the low temperature of the exhaust stream precludes the system from using a CatOx system for VOC control.

No lumber drying kilns in the RBLC database were noted to utilize thermal oxidation. NSLC therefore contends that the use of thermal oxidation to control VOC emissions from the lumber kilns would be considered technically infeasible. However, the facility conservatively conducted a cost analysis in determining the economic feasibility of utilization of an RTO and what, if any, environmental impact it might have.

Wet Scrubbing

Scrubbing of exhaust gas or vapor pollutants from a gas stream is usually accomplished in a packed or plated column where pollutants are absorbed by counter-current flow of a scrubbing liquid. A VOC laden gas stream with relatively high water solubility is required for the wet scrubber to be effective.

The terpenes within the kiln exhaust are not highly soluble but are highly viscous. This would lead to plugging the absorption media of a wet scrubber and leaves the process technically infeasible.

Proper Kiln Design and Operation

Proper maintenance and operation of lumber drying kilns can effectively minimize VOC emissions. A maintenance and operation plan should be developed to include selection of a proper drying schedule and temperature based on moisture content (between 13% and 18%) and manufacturer's specifications. Routine maintenance should also be completed on kilns based on manufacturer's recommendations. This method involves no add-on pollution controls. However, written procedures of best management practices, proper maintenance and operating activities can be an effective abatement technique when combined with training of employees and recordkeeping.

Steps 3, 4 and 5: Rank remaining control technologies by control effectiveness/ Evaluate most effective controls/Select BACT:

Regenerative Thermal Oxidation

NSLC stated in the application that, even if the use of an RTO were technically feasible on a lumber drying kiln, the cost of using an RTO would exceed the benefit of the VOC reduction it offers. The facility included a cost analysis in the application that indicated the current cost of controlling VOC with an RTO would be approximately $23,533 per ton of VOC removed for the biomass kilns and $16,473 per ton of VOC removed for the natural gas kiln. This high cost for VOC control is largely due to the high moisture content of the kiln exhaust stream and low exhaust temperature, as heating water vapor in the exhaust stream to RTO operating temperatures significantly increases the natural gas heating requirement. There would also be associated energy and environmental impacts resulting from the use of natural gas, including additional pollutant emissions such as NO_X from natural gas combustion. See Appendix D of the application for details of the cost analysis.

Proper Kiln Design and Operation

According to the application, the only economically cost-effective control technology for removing VOC emissions from a continuous lumber kiln is the use of "good design and operating practices". Since this control option is the top remaining BACT control technology, after showing that other "add-on" control systems were not technically or economically feasible, no additional cost analysis was performed.

Step 5. Select BACT:

NSLC proposes the following emission level as BACT for VOC:

Pollutant	BACT Determination	BACT Emission Limit	Equivalent Emissions
VOC	Proper Kiln Design and Operating Practices	4.75 lb/MBF, as WPP1 VOC*	DK-1 and 2: 38 lb/hr DK-3: 54.2 lb/hr

*"WPP1 VOC" is an acronym for Wood Products Protocol 1 VOC. WPP1 VOC refers to VOC emissions expressed in accordance with the document "Interim VOC Measurement Protocol for the Wood Products Industry – July 2007." This EPA document established procedures and emission measurement methods to approximate VOC emissions for determining applicability with Federal programs and to establish consistency across State programs for the forest products industry.

A search of EPA RACT/BACT/LAER Clearinghouse indicated that no facilities are utilizing add-on controls for lumber drying kilns, and the proposed VOC emission limit of 4.75 lb/MBF (as WPP1 VOC) is comparable to other BACT determinations for continuous kilns in the wood products industry. The Department concurs that proper kiln design, operation, and maintenance, and an emission limit of 4.75 lb/MBF (as WPP1 VOC) represents BACT for the proposed kilns.

NSLC identified the average moisture content of the dried lumber as a measurable parameter to be used in minimizing VOC emissions from the kilns. VOC emissions would be minimized by not over-drying the lumber, setting a minimum moisture content parameter of approximately 13%. Due to seasonal variability of the wood moisture content and drying times, NSLC has proposed compliance with a rolling 12-month average for comparison to the moisture content target. Also, the Air Permit for the kilns would include a requirement to develop and implement a preventive maintenance plan within 180 days of startup of the first continuous kiln.

Emergency Engines
BACT Determination for VOC

Steps 1 and 2. Identify all control technologies and the feasibility of each: NSLC examined the feasibility of the following control technologies to control VOC emissions:

- Purchase of Certified NSPS JJJJ Engine
- Good Combustion Practices
- Limitation on Hours of Operation

All of these control technologies would be considered technically feasible.

Steps 3, 4 and 5: Rank remaining control technologies by control effectiveness/ Evaluate most effective controls/Select BACT: Purchase of certified NSPS JJJJ engines, good combustion practices and limitations on hours of operation have an undefined control efficiency for VOC emissions. The emergency engines will have low emissions of VOC, compounded with the fact that they will be restricted to 500 hours per year of operation.

Step 5. Select BACT: NSLC proposes good combustion practices and limiting the operating hours for the emergency engines as BACT. Proposed BACT limits will be set to the emission limits required by NSPS Subpart JJJJ which are obtained through proper operation and

maintenance of an EPA certified engine. A summary of these emission limits is shown in Table II.

Facility-Wide BACT determination for CO2e

***Step 1. Identify all control technologies*:** Controlling CO_{2e} emissions would involve the use of the following:

- Carbon Capture and Storage
- Optimum Combustion Efficiency
- Fuel Selection
- Oxygen Enrichment/Oxy-Fuel Combustion
- Good Design and Operating Practices

Carbon Capture and Storage

An effective carbon, capture, and storage (CCS) system would require three elements:

- Separation technology for the CO2 exhaust stream (i.e., "carbon capture" technology),
- Transportation of CO_2 to a storage site, and
- A viable location for long-term storage of CO_2.

These three elements work in series. Consequently, to execute a CCS program as BACT, all three elements must be available.

CO2 Capture

CO_2 Capture involves post-combustion capture of CO_2 from the emission units and sequestration of the CO_2. Carbon capture is an established process in some industry sectors, although not in the wood products sectors. In theory, carbon capture could be accomplished with low pressure scrubbing of CO_2 from the exhaust stream with either solvents (e.g., amines and ammonia), solid sorbents, or membranes. However, only solvents have been used to-date on a commercial (slip stream) scale, and solid sorbents and membranes are only in the R&D phase.

CO_2 must be compressed from near-atmospheric pressure to pipeline pressure (around 2,000 psia) prior to transportation to an appropriate sequestration site. The compression of CO_2 requires a large auxiliary power load, resulting in the use of additional fuel (and additional CO_2 emissions) to generate this needed electricity.

CO2 Transport

CO_2 that has been captured and compressed is subsequently transported to the site designated for long-term geologic storage or use in enhanced oil recovery (EOR). Pipelines are expected to be the most economical and efficient method of transporting CO_2 for commercial purposes.

No CO_2 transportation infrastructure is currently available for the Bucks Sawmill and no plan for adding CO_2 transportation has been proposed by a governmental or private sector entity within the initial operating period of the Bucks Sawmill.

CO2 Storage

CO_2 storage refers to the process of injecting CO_2 into subsurface formations for long-term sequestration. CO_2 storage is currently utilized across the U.S. and around the world. The US DOE has successfully completed two industrial "Major Demonstration" projects at a biofuels plant and a hydrogen production facility. Underground CO_2 injection has also been used successfully to boost production efficiency of oil and gas wells by re-pressurizing the reservoir, and in the case of oil, by increasing mobility.

There are no active carbon sequestration projects in South Alabama to assess the suitability of geology for permanent carbon storage. Therefore, there are no potential sites where CO_2 could be sequestered in the vicinity of the facility location. The nearest storage sites would be in Southern Mississippi more than 60 miles from the Bucks Sawmill. Since there are no potential sites where CO_2 could be used in the vicinity of the Bucks Sawmill, and there are currently no CO_2 pipelines which could transport compressed CO_2 to a region of the country (e.g., South Alabama) where it could be used, NSLC's evaluation of CCS technology assumed that the construction of a pipeline for the transport of CO_2 to a region where it could be used would be necessary.

While carbon capture technology may be technologically available on a small-scale, it has not been demonstrated in practice for wood product facilities. CCS is not commercially available as BACT at present for the proposed project, given the limited deployment of only slipstream/demonstration applications of CCS. Consequently, CCS is unavailable for all project combustion systems due to the lack of demonstrated technology and storage locations. Therefore, CCS has not been carried forward into subsequent steps of the BACT analysis for a representative emission unit in the Bucks Sawmill project scope.

Optimum Combustion Efficiency

Greenhouse gas (GHG) emissions are generated when combustible organics are oxidized. As such, typical add-on combustion controls for organic compound destruction are not considered to be GHG control options. GHG emissions from combustion units are minimized when highly efficient combustion devices are implemented that require less fuel usage to achieve the desired energy output. Therefore, GHG BACT considerations involve a review of high efficiency combustion equipment and technology options. By selecting a high efficiency combustion unit, GHG emissions are minimized.

Fuel Selection

The carbon intensity of fuels can vary significantly across available fossil fuels commonly used in industry. Fuels with low carbon intensity have lower GHG emissions than fuels with high carbon intensity. Therefore, GHG BACT considerations involve the evaluation of low carbon intensity fuel options. By selecting a low carbon fuel, GHG emissions are minimized. The use of pipeline quality natural gas as fuel is inherent to the proposed project. While the use of wood and wood residual biomass is not inherently low carbon, finding use for on-site fuel would eliminate the need for additional transportation fuels resulting in lower overall GHG emissions in the region.

Oxygen Enrichment/Oxy-Fuel Combustion

A certain amount of air is required to provide sufficient oxygen for the combustion of fuel. Air is primarily made up of 78% nitrogen, 21% oxygen and 1% argon and other gases. Oxygen Enrichment/Oxy-Fuel combustion is the substitution of oxygen for combustion air to burn the fuel in the furnace. Oxygen-enriched combustion refers to increasing the oxygen content of the air/oxygen mixture used for the combustion reactions to in the range of 21-35 percent. Oxy-fuel combustion refers to entirely replacing the combustion air supply with 100 percent pure oxygen.

The use of oxygen-enriched or oxy-fuel combustion increases furnace efficiency by improving thermal efficiency and heat transfer. GHG emissions can be further minimized using various oxygen enrichment and oxyfuel strategies. These strategies improve efficiency by reducing or removing the N_2 portion of typical combustion air. Accordingly, a reduced volume of combustion air would be required to complete the combustion reaction, the flame temperature would increase, the available heat would increase, and the thermal efficiency of the system would be improved. However, while oxygen enrichment/oxy-fuel combustion has been successfully applied to some furnaces or burners in other industrial sectors, this technology is not available for the proposed lumber kiln burners in the specific application planned for Bucks Sawmill project.

Good Design and Operating Practices

Good combustion design includes proper burner and unit design for the proposed combustion units. For both the biomass and natural gas burner attached to each lumber kiln, the exhaust gases must be in direct contact with the lumber being dried. Additionally, the doors to the kilns must remain open for operation. The design of the conditioning chambers of the kilns is utilized to transfer the heat produced and limit the amount of fuel required to complete the drying process. Good operating practices include good burner maintenance and operation and good air to fuel mixing to promote complete combustion. By operating a combustion unit as efficiently as possible, GHG emissions are minimized. As part of the normal operating practices, daily/weekly/monthly/and annual preventative maintenance practices would be performed according to the manufacturer's recommendations.

Steps 2 Eliminate technically infeasible options: NSLC contends in the application that the only technically feasible options for controlling GHG emissions from combustion sources at the proposed sawmill would be Optimum Combustion Efficiency, Fuel Selection and Good Design and Operating Practices.

Steps 3 though 5. Rank remaining control technologies by effectiveness; evaluate most effective controls and demonstrate results; select BACT: NSLC proposes the following CO_{2e} BACT limits by utilizing Optimum Combustion Efficiency, Fuel Selection and Good Design and Operating Practices:

Emission Unit	Rated Capacity (Specified unit, each)	GHG Emission Rate (tpy, each)
Continuous Kiln No. 1 Biomass Buner No. 1	70 MMBF/yr 40 MMBtu/hr	36,714
Continuous Kiln No. 2 Biomass Buner No. 2	70 MMBF/yr 40 MMBtu/hr	36,714
Continuous Kiln No. 3 Natural Gas Burner No. 3	100 MMBF/yr 45 MMBtu/hr	23,080
Emergency Fire Pump Engine	700 HP 500 hr/yr	134.90
Emergency Generator No.1	750 HP 500 hr/yr	144.53
Emergency Generator No.2	750 HP 500 hr/yr	144.53
Emergency Generator No.3	750 HP 500 hr/yr	144.53

Compliance with the proposed GHG emission limits would be demonstrated by operating and maintaining the process units in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by NSLC. NSLC's proposed control method is consistent with the GHG BACT determinations that were identified in the RBLC and similar facility review for similar emission sources. The Department concurs with these BACT proposals for the combustion sources at the NSLC facility.

Compliance

NSLC would be required to meet the following limits, monitoring, and recordkeeping compliance requirements for this proposed project:

Table III Compliance

Emission Point ID	Compliance Requirements
CDK-1 CDK-2 CDK-3	Maintain proper operating and maintenance practices and retain records of such practices
	Measure and maintain records of monthly and 12-month rolling average lumber moisture content as it exits the planer machine 12-month rolling average moisture content ≥13%
	Maintain records of monthly and 12-month rolling total lumber dried per kiln as indicated below. Limit emissions as indicated below.

CDK-1 CDK-2 CDK-3	TOTAL lumber dried on site ≤ 240 MMBF/yr CDK-1 ≤ 70 MMBF/yr PM 1.12 lb/hr PM_{10} 0.83 lb/hr $PM_{2.5}$ 0.79 lb/hr VOC (as WPP1) 4.75 lb/MBF CO_{2e} 36,714 TPY CDK-2 ≤ 70 MMBF/yr PM 1.12 lb/hr PM_{10} 0.83 lb/hr $PM_{2.5}$ 0.79 lb/hr VOC (as WPP1) 4.75 lb/MBF CO_{2e} 36,714 TPY CDK-3 ≤ 100 MMBF/yr PM 0.25 lb/hr PM_{10} 0.59 lb/hr $PM_{2.5}$ 0.59 lb/hr VOC (as WPP1) 4.75 lb/MBF CO_{2e} 23,080 TPY
Facility wide	Visually observe emissions from the kilns and pneumatic system cyclones daily (while they are operating) Visually observe emissions from the engines during non-emergency operation and readiness testing Take corrective measures whenever any visible emissions are observed Inspect and clean pneumatic transfer systems and cyclones, at least annually and whenever visible emissions are observed
PLN1-QPC	Limit emissions to: PM 0.86 lb/hr PM_{10} 0.01 lb/hr $PM_{2.5}$ 0.01 lb/hr Conduct testing to demonstrate compliance with the proposed emission limits
PLN1-HEC	Limit emissions to: PM 0.37 lb/hr PM_{10} 0.01 lb/hr $PM_{2.5}$ 0.01 lb/hr Conduct testing to demonstrate compliance with the proposed emission limits

SC01 and SC02	Limit emissions to: PM 0.98 lb/hr PM_{10} 0.01 lb/hr $PM_{2.5}$ 0.01 lb/hr Conduct testing to demonstrate compliance with the proposed emission limits
ENG-1 GEN-1 GEN-2 GEN-3	Maintain the engines in accordance with the manufacturer's emission related written instructions Limit emissions in accordance with NSPS Subpart JJJJ to: NOx 2.0 g/hp-hr CO 4.0 g/hp-hr VOC 1.0 g/hp-hr PM 7.71xE-05 lb/MMBtu Limit emissions of ENG-1 to: CO2e 134.9 TPY Limit emissions of GEN-1, 2 and 3 to: CO2e 144.5 TPY Maintain records of maintenance performed and the hours of operation to ensure no engine is operated more than 500/yr Maintain a certificate from the manufacturer that verifies the engine meets the relevant standards

Modeling

NSLC utilized Model Emission Rate for Precursors (MERPs) to evaluate the proposed project's impact on ozone levels in the surrounding area. An ADEM review of the analysis determined that the proposed facility would not be expected to cause or contribute to any violation of a National Ambient Air Quality Standard (NAAQS) or PSD Increment. For further discussion of the analysis, see the attached memo from the Meteorological Section of the Planning Branch (Appendix B) and Appendix F of the application. No additional modeling was performed for any remaining criteria air pollutants as their potential emissions would be less than the applicable significant emissions rates. No modeling was performed for non-criteria HAP pollutants as the continuous kilns are subject to 40 CFR Part 63 Subpart DDDD, The Plywood and Composite Wood Products MACT.

Additional Impacts

Additional impact analyses assess the impacts of air, ground, and water pollution on soils, vegetation, and visibility caused by any increase in emissions of any regulated pollutant resulting from the proposed project and from associated growth. The depth of the analyses depends on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation, and visibility in the source's impact area. NSLC addressed the impacts of the proposed project with respect to growth, soils and vegetation, and visibility.

Soil and Vegetation Impacts

The EPA developed the secondary NAAQS to protect certain air quality related values (i.e., soil and vegetation) that may not be sufficiently protected by the primary NAAQS. The secondary NAAQS, shown in Table F-4, represent levels that provide protection for public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. As the secondary NAAQS were not exceeded for the project, no adverse impact to any soils or vegetation is expected.

Table F-4. Secondary NAAQS Analysis

Pollutant	Averaging Period	Total Concentration[1] ($\mu g/m^3$)	Vegetation Sensitivity[2] Sensitive ($\mu g/m^3$)	Intermediate ($\mu g/m^3$)	Resistant ($\mu g/m^3$)	Secondary NAAQS ($\mu g/m^3$)	Minimum Threshold ($\mu g/m^3$)	Threshold Exceeded?
NO_2	4-Hour	-	3,760	9,400	16,920	N/A	3,760	No
	8-Hour	-	3,760	7,520	15,040	N/A	3,760	No
	1-Month	-	-	564	-	N/A	564	No
	Annual	-	-	94	-	100	94	No
CO	1-wk	-	1,800,000	-	18,000,000	N/A	1,800,000	No
PM_{10}	24-hour	-	-	-	-	150	150	No
$PM_{2.5}$	24-hour	-	-	-	-	35	35	No
	Annual	-	-	-	-	15	15	No

1. As the project only triggered PSD for VOC, no air dispersion modeling was conducted for any pollutants. Therefore, modeled impacts are presumed to be negligible.

2. Screening concentrations based on Table 3.1 in "*A Screening Procedure for Impact of Air Pollution Sources on Plants, Soil and Animals"*, EPA, December 12, 1980. Minimum values noted if range listed.

Associated Growth

The purpose of the growth analysis is to quantify project-associated growth; that is, to predict how much new growth is likely to occur in order to support the source or modification under review, and then to estimate the air quality impacts from this growth. The proposed facility is expected to increase full-time employment opportunities after the construction phase of the project is completed. However, the proposed project is anticipated to have a limited growth impact on Mobile County, Alabama. Up to approximately 300 construction workers are expected to be employed during the approximately 24-month construction phase of the project. Up to 155 full-time employees are anticipated to be hired post-construction. Many of these workers will already reside and conduct business in the region surrounding the proposed facility, and thus would not cause growth-related air quality impacts. While some workers are likely to currently reside outside the region and thus may commute or move to the area, any related potential air quality impacts from these out-of-town workers are too small to be reasonably quantifiable. Therefore, New South would not expect an employment change attributable to the proposed project to cause quantifiable air quality impacts.

Class I Impact and Class II Visibility Analysis

NSLC submitted a Q/D Screening Analysis to Ms. Catherine Collins of the U.S. Fish and Wildlife Service for review. The analysis was conducted as the proposed sawmill would be located approximately 128 kilometers (km) from the Breton National Wildlife Refuge, a Class I

area. "Q" is the sum of the annual NO_X, PM_{10}, SO_2, and sulfuric acid mist (H_2SO_4) emissions, in tons per year (TPY), and "D" is the distance, in kilometers, from the proposed facility to the corresponding Class I area. The analysis was conducted in accordance with the most recent Federal Land Managers' Air Quality Related Values Work Group (FLAG) guidance document (FLAG 2010), which compares the ratio of visibility affecting pollutant (VAP) emissions to the distance from the Class 1 area. NSLC concluded that the proposed project would have no adverse impact on air quality related values in the Breton National Wildlife Refuge. Additional information regarding the analysis can be found in Appendix F of the application.

No Class II visibility assessment is required for this project, as no impact to visibility in the area around the site is anticipated. All stack type sources in the proposed project scope with the potential to generate a coherent plume will be equipped with control devices and other work practice standard based measures to ensure that significant opacity for visible emissions from the facility's stack discharges will not produce any nearby "plume blight." New South's efforts to demonstrate compliance with applicable federal National Emissions Standards for Hazardous Air Pollutants (NESHAP), federal New Source Performance Standards (NSPS), and Alabama State Implementation Plan (SIP) requirements for particulate matter (PM) (and opacity as a surrogate for PM emissions) will ensure that no Class II area visibility impacts will occur during normal operation of the proposed sawmill.

Applicability: State Regulations

Particulate Matter

Fuel Burning Equipment

The proposed CDKs and engines would not be subject to ADEM Admin. Code r. 335-3-4-.03(1), because they do not provide indirect heat, and are therefore not considered "fuel burning equipment" as defined in ADEM Admin. Code r. 335-3-1-.02(ee).

Process Industries – General

All proposed units and processes that are point sources, except for the engines, would be subject to the State particulate matter emission standards for process industries as provided in ADEM Admin. Code r. 334-3-4-.04(1).

Visible Emissions

All proposed units and processes would be subject to the State visible emission standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that no air emission source may emit particulate of an opacity greater than 20% (as measured by a six-minute average) more than once during any 60-minute period and at no time shall emit particulate of an opacity greater than 40% (as measured by a six-minute average).

Sulfur Dioxide

The proposed CDKs and engines would not be subject to the State sulfur dioxide emission standard of 4.0 lb/MMBtu of heat input [ADEM Admin. Code r. 335-3-5-.01(1)(b)] as the units are not considered fuel burning equipment. Therefore, the potential emissions of SO_2 from the kilns and engines were calculated using emission factors in this analysis.

VOC

ADEM Admin. Code r. 335-3-6-.07 addresses the control of organic emissions from gasoline dispensing facilities – Stage I. The rule applies to a gasoline dispensing facility that commences construction after October 1, 1990, unless it meets one of the exceptions provided. ADEM Admin. Code r. 335-3-6-.07(2)(d), states that any new facility, with an actual or expected throughput of gasoline of less than 4,000 gallons per month for the months of June, July, and August during full operation, is exempt from the rule provided that the tanks are equipped with a submerged fill pipe. New South stated in the application that the 350-gallon gasoline storage tank would be equipped with a submerged fill pipe. The facility also indicated that the annual throughput of the gasoline tank would be approximately 6,500 gallons. Therefore, the expected throughput during each summer month would be less than 4,000 gallons, and the facility would not be subject to this rule.

Emission Testing and Monitoring

Dry Kilns

The US EPA recently documented the difficulty of stack testing kilns in their documentation of proposed PCWP MACT amendments. EPA stated within EPA PCWP MACT Proposed Rule Prepublication Copy for Federal Register Notice 5/5/23:

> "For CDKs, direct measurement of total kiln exhaust flow is not technically feasible due to the significant volume of fugitive emissions from the kiln openings. In addition to being unable to measure total flow, many CDKs have no specific emission point (or conduit) in which to measure emissions concentration *(e.g.*, no outlet stack or hood, or in an indirect-fired kiln no kiln air return duct to a burner). This lack of a specific emission point for measurement of total kiln air flow and concentration is also an economic limitation, because even if outlet vents suitable for testing were present for a portion of exhaust, all such vents would need to be tested to ensure uniformity of concentration or to establish vent-specific concentrations, which would greatly increase source testing costs (while total flow would continue to remain uncertain, limiting usefulness of the data for prescribing or enforcing an emission standard)."

Based upon these findings, testing would not be required for the dry kilns to demonstrate compliance with BACT and synthetic minor limits. To ensure that the maximum capacity of the proposed kilns is not exceeded, NSLC would be required to calculate kiln production on a monthly and 12-month rolling total basis, to be updated within ten (10) days of the end of each calendar month. The facility would also conduct daily observations for any visible emissions from the kiln stacks and calculate the moisture content of the lumber on a monthly and 12-month average basis.

Pneumatic Systems

Testing would be required for the proposed planer mill and sawdust storage silos system cyclones to determine if they can comply with the proposed emission limits of PM, PM_{10} and $PM_{2.5}$. These units would also be subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM), as they would utilize control devices to meet the applicable standards and the pre-

controlled emissions would be greater than 100 TPY. To ensure proper operation of the sawmill and planer mill, monitoring would include daily visual observations for any emissions from the cyclones. Annual physical inspections of the control devices would also be required.

Engines

As previously noted, no testing would be required for the engines as they would be certified by the manufacturer to meet the applicable standards. The facility would visually observe emissions from the engines during non-emergency operation and readiness testing and take corrective measures if any emissions are noted.

Recordkeeping and Reporting

Recordkeeping

Within 180 days of issuance of Temporary Authorization to Operate a kiln, NSLC would be required to develop, implement, and submit to the Air Division a preventive maintenance and operation plan for the kiln. NSLC would be required to maintain records of its actions taken to comply with proper maintenance and operating practices. Records of all visual observations would also be required, as well as records of the average monthly and 12-month rolling lumber moisture content, lumber production, and engine hours of operation. These records would be maintained on-site in a permanent form readily available for inspection.

Reporting

NSLC would be required to submit Semiannual Monitoring Reports for the proposed units, which would include a certification that all emission monitoring and proper maintenance and operating practices were accomplished as required during the reporting period.

Environmental Justice

The Draft Permit contains emission limits based on state and federal regulations that are protective of human health and the environment. In addition, the Department has a robust public engagement that utilizes a number of tools, such as EPA's EJ Screen: Environmental Justice Screening and Mapping Tool, to ensure that local residents and stakeholders are provided a meaningful opportunity to participate in the permitting process.

(http://www.adem.alabama.gov/MoreInfo/pubs/ADEMCommunityEngagement.pdf)

Conclusions and Recommendations

This analysis indicates that this facility would meet the requirements of all applicable federal and State rules and regulations. Therefore, I recommend that NSLC be issued the following Air Permits for the proposed sawmill facility, pending any comments received during the 30-day public comment period:

X001: Log Debarking, Sawmill, Sawmill Chipper and Screens, and Mechanical Conveyance to Truck Loadout

X002: Continuous Dry Kilns 1 and 2 (CDK-1, CDK-2), each w/40 MMBtu/hr Wood-Fired Burner

Continuous Dry Kiln 3 (CDK-3) w/45 MMBtu/hr Natural Gas-Fired Burner

X003: Planer Mill Operations which includes Planer quad Pack Cyclone (PLN-QPC) and High Efficiency Truck Bin Cyclone (PLN1-HEC)

X004: Sawdust Pneumatic Systems and Two (2) silos and cyclones (SC01 and SC02)

X005: 700 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Fire Pump Engine (NSPS, JJJJ)
Three (3) 750 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Generators (NSPS, JJJJ)

Lester Meredith
Chemical Branch
Air Division

February 29, 2024
Date

Appendix A
Potential Emissions

EUID No	Emission Unit Description	APCD ID No	Control Device Description	Filterable PM	Total PM_{10}	Total $PM_{2.5}$	Condensable PM	NO_X	CO	VOC	SO_2	Lead	CO_2e	Total HAP[2]	Max Individual HAP[1]
Point Emissions Sources															
CDK1	Continuous Kiln No. 1	N/A	None	4.90	3.64	3.47	2.38	9.66	15.19	166.25	4.38	8.41E-03	36,714	13.01	6.30
CDK2	Continuous Kiln No. 2	N/A	None	4.90	3.64	3.47	2.38	9.66	15.19	166.25	4.38	8.41E-03	36,714	13.01	6.30
CDK3	Continuous Kiln No. 3	N/A	None	1.02	2.57	2.57	1.55	9.66	16.23	238.63	0.12	9.66E-05	23,080	13.02	8.05
PLN1	Planer Mill	DC-1	Quad Pack Cyclone	3.76	0.04	0.04		--	--	--	--	--	--	--	--
		DC-2	High-Eff Cyclone	1.60	0.04	0.04		--	--	--	--	--	--	--	--
ENG1	Emergency Fire Water Pump	N/A	None	9.44E-05	9.44E-05	9.44E-05	1.21E-02	0.77	1.54	0.39	7.20E-04	--	134.9	1.92E-04	2.14E-06
GEN1	Emergency Generator Engine No. 1	N/A	None	1.01E-04	1.01E-04	1.01E-04	1.30E-02	0.83	1.65	0.41	7.72E-04	--	144.5	2.21E-04	2.46E-06
GEN2	Emergency Generator Engine No. 2	N/A	None	1.01E-04	1.01E-04	1.01E-04	1.30E-02	0.83	1.65	0.41	7.72E-04	--	144.5	2.21E-04	2.46E-06
GEN3	Emergency Generator Engine No. 3	N/A	None	1.01E-04	1.01E-04	1.01E-04	1.30E-02	0.83	1.65	0.41	7.72E-04	--	144.5	2.21E-04	2.46E-06
SC01	Fuel Silo Cyclone No. 1	N/A	Cyclone	4.28	1.17E-02	7.79E-04		--	--	--	--	--	--	--	--
SC02	Fuel Silo Cyclone No. 2	N/A	Cyclone	4.28	1.17E-02	7.79E-04		--	--	--	--	--	--	--	--
DST1	Diesel Storage Tank	N/A	None	--	--	--	--	--	--	1.67E-04	--	--	--	--	--
GST1	Gasoline Storage Tank	N/A	None	--	--	--	--	--	--	4.06E-02	--	--	--	--	--
Fugitive Emissions Sources															
FUG1	Log Debarking	N/A	None	7.55	5.51	2.75		--	--	--	--	--	--	--	--
FUG2	Mechanical Conveyance of Bark to Bark Hog	N/A	None	0.01	0.00	4.14E-04		--	--	--	--	--	--	--	--
FUG3	Bark Hogging	N/A	None	0.25	0.13	0.06		--	--	--	--	--	--	--	--
FUG4	Mechanical Conveyance of Scraps to Chipper	N/A	None	0.02	0.01	1.12E-03		--	--	--	--	--	--	--	--
FUG5	Log Chipping	N/A	None	2.03	1.02	0.51		--	--	--	--	--	--	--	--
FT01	Road Travel	N/A	None	0.31	0.06	0.02		--	--	--	--	--	--	--	--
	Facility-Wide Emissions (tpy):			**24.8**	**10.0**	**9.7**	**6.4**	**32.2**	**53.1**	**572.8**	**8.88**	**1.69E-02**	**97,077**	**39.0**	**20.7**
	Title V Major Source Threshold (tpy):			**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**10**	**100,000**	**25**	**10**
	Title V Major Source? (Yes/No):			**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**
	PSD Major Source Threshold (tpy):			**250**	**250**	**250**	**250**	**250**	**250**	**250**	**250**	**250**	**100,000**	**N/A**	**N/A**
	PSD Major Source? (Yes/No):			**No**	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**
	PSD Significant Emission Rate (tpy):			**25**	**15**	**10**		**40**	**100**	**40**	**40**	**0.6**	**75,000**	**N/A**	**N/A**
	PSD Permitting Triggered? (Yes/No):			**No**	**No**	**No**		**No**	**No**	**Yes**	**No**	**No**	**Yes**	**No**	**No**

1. The maximum individual HAP is methanol.
2. Total HAP from CDK1, CDK2, and CDK3 are accounted for under each burner.

Appendix B
Modeling Memo

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
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October 27, 2023

MEMORANDUM

TO: Lester Meredith
Natural Resources Section
Chemical Branch
Air Division

FROM: Michael Leach
Meteorological Section
Planning Branch
Air Division

SUBJECT: Air Quality Analysis for Canfor/New South Lumber Company Prevention of Significant Deterioration Permit Application

ADEM has completed its review of an air quality analysis performed by Trinity Consultants on behalf of Canfor/New South Lumber Company for their proposed facility in Bucks, Alabama. The purpose of the analysis was to assess the impacts on air quality from emissions of VOC from the proposed facility. Since the project is only significant for VOC, AERMOD air dispersion modeling was not required for this project. However, a Modeled Emission Rates for Precursors (MERPs) analysis for Ozone was required.

MERPs ANALYSIS:

Precursor emission impacts for Ozone were considered and a Modeled Emission Rates for Precursors (MERPs) analysis was performed. The Ozone precursors are the pollutants VOC and NO_x. If the calculations from the MERPs analyses are less than 100%, it indicates that the air quality threshold will not be exceeded, and no further modeling is required. For Ozone, the following total emissions were considered: for VOC, 572.8 TPY; and for NO_x, 32.23 TPY. Canfor/New South Lumber Company evaluated the EPA hypothetical sources closest to their proposed facility in Bucks, Alabama. These hypothetical sources were modeled by EPA and the results from the modeling can be used in a MERPs analysis. Canfor/New South Lumber Company looked at hypothetical sources in Autauga County, Alabama; Bay County, Florida; and Orleans Parish, Louisiana. Canfor/New South Lumber Company determined that the

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110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
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(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

most representative source was the Autauga County, Alabama source. The Ozone MERP values from this source used in the analysis are 249 TPY for NO_x and 6,522 TPY for VOC. Using these values in the MERPs equation provides the following calculation:

(32.23 TPY NO_x/249 TPY NO_x 8-hr daily max O3 MERP) + (572.8 TPY VOC/6,522 TPY VOC 8-hr daily max O3 MERP) X 100 = 21.7%.

This shows that the MERPs value for Ozone is below 100%, and therefore no further analysis was required.

In addition, preconstruction monitoring requirements were addressed, and it was determined that preconstruction monitoring was not required. Ozone data for the Chickasaw, Alabama Ozone monitor was included in the application.

CONCLUSION

In conclusion, emissions of VOC from the proposed Canfor/New South Lumber Company facility in Bucks, Alabama, are not expected to cause or contribute to any violation of a NAAQS or PSD Increment.

Appendix C
Draft Permits

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: NEW SOUTH LUMBER COMPANY

FACILITY NAME: BUCKS SAWMILL

LOCATION: BUCKS, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
503-S002-X001	Green Lumber Sawing Processes which includes: 1. Log Debarking 2. Sawmill, Sawmill Chipper, and Screens 3. Mechanical Conveyance to Truck Loadout

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

NEW SOUTH LUMBER COMPANY
BUCKS, ALABAMA
PERMIT NO. 503-S002-X001
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the

Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report shall include the probable cause of the said deviations, and any corrective actions or preventative measures that were taken.

11. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

12. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

13. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

14. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

16. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

17. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

18. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. Reports to the Air Division of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with ADEM Admin. Code r. 335-3-16-.04(9).

22. The Permittee shall submit an Annual Compliance Certification to the Air Division no later than 60 days following the anniversary of the issuance of this permit.

    (a) The compliance certification shall include the following:

        i) The identification of each term or condition of this permit that is the basis of the certification;

        ii) The compliance status;

        iii) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        iv) Whether compliance has been continuous or intermittent; and

        v) Such other facts as the Department may require to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

    Alabama Department of Environmental Management
    Air Division
    P.O. Box 301463
    Montgomery, AL 36130-1463

    The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Green Lumber Sawing Processes
Summary Page

Description: Debarker, Bark Hog Conveyance, Bark Hog Sawmill, Scrap Conveyance, Chipper Mechanical Conveyance to Truck Loadouts

Installation Date: February 2024

Operating Capacity: 240 MMBF/yr

Operating Schedule: 24 hrs/day, 7 days/week, 52 weeks/yr

Pollutants Emitted:

Emission Point	Point Description	Pollutant	Emission Limit	Standard
Fugitive	Green Lumber Sawing Processes	PM	N/A	N/A

Green Lumber Sawing Processes Provisos

	Regulations
1) Applicability	
These sources are subject to the applicable requirements of Rule 335-3-16-.03, "Major Source Operating Permits".	ADEM Admin. Code r. 335-3-16-.03
2) Emission Standards	
There are no emission standards for these processes.	
3) Compliance and Performance Test Methods and Procedures	
There are no compliance or performance test methods and procedures for these processes.	
4) Emission Monitoring	
(a) At least once per week, the Permittee shall inspect the conveyor systems and transfer points for leaks. Any spillage noted around the work area shall be removed and all leaks repaired in a timely manner.	ADEM Admin. Code r. 335-3-16-.05(c)1
(b) The Permittee shall operate the conveyor systems in a manner to ensure materials are confined.	
(c) The Permittee shall inspect the conveyor belts at least once each calendar quarter for serviceability and repair them as necessary.	
5) Recordkeeping and Reporting Requirements	
(a) Records of emission monitoring performed shall be maintained in a permanent form on-site and available for inspection for at least five (5) years from the date of generation of each record. These records shall include:	ADEM Admin. Code r. 335-3-16-.05
(i) The date, time, and results of each conveyor system and transfer point inspection and the name of the individual making the inspection;	
(ii) If the results of the inspection indicated that maintenance was needed, the date(s) and nature of the maintenance performed.	
(b) A Semiannual Monitoring Report, as required by General Permit Proviso No. 21, shall be submitted no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st). The report shall include the following information for this emission unit:	ADEM Admin. Code r. 335-3-16-.05(c)3
(i) A statement as to whether all emission monitoring was completed as required during the reporting period, and if not, the date(s) and reason(s) why the emission monitoring was not performed;	
(ii) The date(s), nature, and results of any maintenance that was needed.	

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: NEW SOUTH LUMBER COMPANY

FACILITY NAME: BUCKS SAWMILL

LOCATION: BUCKS, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
503-S002-X002	Lumber Dry Kilns which includes: 1. Continuous Dry Kiln #1 (CDK-1) w/40 MMBtu/hr Wood-Fired Burner 2. Continuous Dry Kiln #2 (CDK-2) w/40 MMBtu/hr Wood-Fired Burner 3. Continuous Dry Kiln #3 (CDK-3) w/ 45 MMBtu/hr Natural Gas-Fired Burner

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

NEW SOUTH LUMBER COMPANY
BUCKS, ALABAMA
PERMIT NO. 503-S002-X002
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the

Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report shall include the probable cause of the said deviations, and any corrective actions or preventative measures that were taken.

11. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

12. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

13. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

14. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

16. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

17. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

18. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. Reports to the Air Division of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with ADEM Admin. Code r. 335-3-16-.04(9).

22. The permittee shall submit an Annual Compliance Certification to the Air Division no later than 60 days following the anniversary of the issuance of this permit.

    (a) The compliance certification shall include the following:

        i) The identification of each term or condition of this permit that is the basis of the certification;

        ii) The compliance status;

        iii) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        iv) Whether compliance has been continuous or intermittent; and

        v) Such other facts as the Department may require to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

    Alabama Department of Environmental Management
    Air Division
    P.O. Box 301463
    Montgomery, AL 36130-1463

    The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Lumber Dry Kilns
Summary Page

Description: CDK-1 Continuous Dry Kiln w/40 MMBtu/hr Wood-Fired Burner
CDK-2 Continuous Dry Kiln w/40 MMBtu/hr Wood-Fired Burner
CDK-3 Continuous Dry Kiln w/45 MMBtu/hr Natural Gas-Fired Burner

Installation Date: February 2024

Operating Capacity: 70 MMBF/yr, 70 MMBF/yr, 100 MMBF/yr

Operating Schedule: 24 hrs/day, 7 days/week, 52 weeks/yr

Pollutants Emitted:

Emission Point	Point Description	Pollutant	Emission Limit	Standard
CDK-1	Continuous Dry Kiln 1	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for P < 30 TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	1.12 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.83 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.79 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		VOC (as WPP1)	4.75 lb/MBF (BACT)	ADEM Admin. Code r. 335-3-14-.04
		CO_{2e}	36,714 TPY (BACT)	ADEM Admin. Code r. 335-3-14-.04
CDK-2	Continuous Dry Kiln 2	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for P < 30 TPH Or $E = 17.31(P)^{0.16}$ for P $\geq$ 30 TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	1.12 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.83 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.79 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		VOC (as WPP1)	4.75 lb/MBF (BACT)	ADEM Admin. Code r. 335-3-14-.04
		CO_{2e}	36,714 TPY (BACT)	ADEM Admin. Code r. 335-3-14-.04

CDK-3	Continuous Dry Kiln 3	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for $P < 30$ TPH Or $E = 17.31(P)^{0.16}$ for $P \geq 30$ TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	0.25 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.59 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.59 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		VOC (as WPP1)	4.75 lb/MBF (BACT)	ADEM Admin. Code r. 335-3-14-.04
		CO_{2e}	23,080 TPY (BACT)	ADEM Admin. Code r. 335-3-14-.04

Lumber Dry Kilns Provisos

	Regulations
1) Applicability	
(a) These sources are subject to the applicable requirements of Rule 335-3-16-.03, "Major Source Operating Permits".	ADEM Admin. Code r. 335-3-16-.03
(b) These sources are subject to the applicable requirements of the National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products, 40 CFR Part 63, Subpart DDDD, and to the NESHAP General Provisions, 40 CFR Part 63, Subpart A as provided in 40 CFR §63.2290 and Table 10 of Subpart DDDD.	ADEM Admin. Code r. 335-3-11-.06(81) and ADEM Admin. Code r. 335-3-11-.06(1)
(c) These sources are subject to Best Available Control Technology (BACT) limits for volatile organic compounds (VOC) and greenhouse gases (as CO2e) established pursuant to the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]".	ADEM Admin. Code r. 335-3-14-.04
(d) These sources are subject to synthetic minor source limits to restrict the potential to emit below the significant emission rates for particulate matter (PM) established at ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration (PSD))".	ADEM Admin. Code r. 335-3-14-.04
2) Emission Standards	
(a) The Permittee shall not cause or allow the emission of particulate matter (as TSP) in any one hour from any process in excess of the amount determined by the following equations: $E=17.31P^{0.16}$ (P≥30 TPH) $E=3.59P^{0.62}$ (P<30 TPH) Where: E = Emissions (in pounds per hour) P = Process weight (in tons per hour)	ADEM Admin. Code r. 335-3-4-.04
(b) The Permittee shall not cause or allow total particulate matter to be emitted from CDK-1 and CDK-2 in excess of 1.12 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(c) The Permittee shall not cause or allow total particulate matter to be emitted from CDK-3 in excess of 0.25 lb/hr.	ADEM Admin. Code r. 335-3-14-.04

	Regulations
(d) The Permittee shall not cause or allow particulate matter less than 10 microns to be emitted from CDK-1 and CDK-2 in excess of 0.83 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(e) The Permittee shall not cause or allow particulate matter less than 10 microns to be emitted from CDK-3 in excess of 0.59 lb/hr.	ADEM Admin. Code r. 335-3-14-.04
(f) The Permittee shall not cause or allow particulate matter less than 2.5 microns to be emitted from CDK-1 and CDK-2 in excess of 0.79 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(g) The Permittee shall not cause or allow particulate matter less than 2.5 microns to be emitted from CDK-3 in excess of 0.59 lb/hr.	ADEM Admin. Code r. 335-3-14-.04
(h) The Permittee shall not cause or allow visible emissions with a six-minute average opacity greater than 20% to be emitted more than once during any 60-minute period. The permittee shall not cause or allow visible emissions with a six-minute average opacity of greater than 40% to be emitted at any time.	ADEM Admin. Code r. 335-3-4-.01(1)
(i) The Permittee shall not cause or allow volatile organic compounds (WPP1) to be emitted from each of these units in excess of 4.75 lb/MBF.	ADEM Admin. Code r. 335-3-14-.04
(j) The Permittee shall not cause or allow CO_{2e} to be emitted from CDK-1 and CDK-2 in excess of 36,714 TPY (each).	ADEM Admin. Code r. 335-3-14-.04
(k) The Permittee shall not cause or allow CO_{2e} to be emitted from CDK-3 in excess of 23,080 TPY.	ADEM Admin. Code r. 335-3-14-.04
(l) The Permittee shall not cause or allow the production of dried lumber from CDK-1 and CDK-2 to exceed 70 MMBF (each) during any consecutive 12-month period.	ADEM Admin. Code r. 335-3-14-.04
(m) The Permittee shall not cause or allow the production of dried lumber from CDK-3 to exceed 100 MMBF during any consecutive 12-month period.	ADEM Admin. Code r. 335-3-14-.04
(n) The Permittee shall not cause or allow the production of dried lumber from the facility to exceed 240 MMBF during any consecutive 12-month period.	ADEM Admin. Code r. 335-3-14-.04
(o) The Permittee shall not cause or allow the 12-month rolling average moisture content of dried lumber to be < 13%.	ADEM Admin. Code r. 335-3-14-.04
3) <u>Compliance and Performance Test Methods and Procedures</u>	
(a) If testing is required, compliance with the total particulate emission rates of these units shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.	ADEM Admin. Code r. 335-3-1-.05

	Regulations
(b) If testing is required, compliance with the particulate matter less than 10 microns and 2.5 microns emission rates of these units shall be determined in accordance with 40 CFR Part 51, Appendix M, Methods 201A and 202.	ADEM Admin. Code r. 335-3-1-.05
(c) Compliance with the visible emissions from each unit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.	ADEM Admin. Code r. 335-3-1-.05
(d) If testing is required, compliance with the volatile organic compounds (VOC) emission rates of these units shall be determined in accordance with EPA OTM 26.	ADEM Admin. Code r. 335-3-1-.05
4) <u>Emission Monitoring</u>	
(a) The Permittee shall calculate and record the average monthly and 12-month rolling average moisture content of the dried lumber.	ADEM Admin. Code r. 335-3-14-.04
(b) The Permittee shall visually observe the emissions from the kiln stacks (while operating) a minimum of once each day during daylight hours.	ADEM Admin. Code r. 335-3-16-.05(c)1
(c) Whenever any visible emissions are observed, the Permittee shall take corrective action as soon as practicable but no longer than 24 hours from the time of the observation, followed by an additional observation to confirm there are no visible emissions observed from the applicable kiln stack.	ADEM Admin. Code r. 335-3-16-.05(c)1
5) <u>Recordkeeping and Reporting Requirements</u>	
(a) Within 180 days of issuance of Temporary Authorization to Operate a kiln, the Permittee shall develop, implement, and submit to the Air Division a preventive maintenance and operation plan for the kiln.	ADEM Admin. Code r. 335-3-14-.04
(b) The Permittee shall maintain records documenting its compliance with the preventive maintenance and operation plan on-site.	ADEM Admin. Code r. 335-3-14-.04
(c) Records of emission monitoring performed shall be maintained on-site and include:	ADEM Admin. Code r. 335-3-16-.05(c)2
(i) The date, time, and results of each daily observation for any emissions from the kiln stacks and the name of the individual making the observation;	
(ii) The date(s), nature, and results of any corrective action taken when any emissions were observed from a kiln stack.	
(d) Within ten (10) days of the end of each calendar month, records of the average lumber moisture content for the last calendar month shall be recorded and the rolling 12-month average updated.	ADEM Admin. Code r. 335-3-14-.04

	Regulations
(e) The Permittee shall maintain records of total production for each kiln and the combined total production of all kilns, including monthly production and 12-month rolling totals. Within ten (10) days of the end of each calendar month, records of the total throughput for the last calendar month shall be recorded and the rolling 12-month total updated.	ADEM Admin. Code r. 335-3-14-.04
(f) The Permittee shall retain all required records in a permanent form suitable and readily available for inspection for a period of five (5) years from the date of generation of each record.	ADEM Admin. Code r. 335-3-16-.05
(g) A Semiannual Monitoring Report, as required by General Permit Proviso No. 21, shall be submitted no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st. This report shall include the following information for this unit:	ADEM Admin. Code r. 335-3-16-.05(c)3
(i) A certification that all emission monitoring, proper maintenance, and operating practices were accomplished as required during the reporting period, and if not, describe the date and reason any required action was not accomplished;	
(ii) The monthly and 12-month rolling totals of dried lumber production calculated during the reporting period.	

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: NEW SOUTH LUMBER COMPANY

FACILITY NAME: BUCKS SAWMILL

LOCATION: BUCKS, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
503-S002-X003	Planer Mill Operations which includes: 1. Planer Quad Pack Cyclone (PLN1-QPC) 2. High Efficiency Truck Bin Cyclone (PLN1-HEC)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

NEW SOUTH LUMBER COMPANY
BUCKS, ALABAMA
PERMIT NO. 503-S002-X003
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the

Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report shall include the probable cause of the said deviations, and any corrective actions or preventative measures that were taken.

11. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

12. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

13. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

14. Prior to a date to be specified by the Chief of the Air Division in the authorization to operate, emission tests are to be conducted by persons familiar with and using the EPA Sampling Train and Test Procedure as described in the Code of Federal Regulations, Title 40, Part 60, for the following pollutants. Written tests results are to be reported to the Air Division within 30 days of completion of testing.

Particulates	(x)	Carbon Monoxide	( )
Sulfur Dioxide	( )	Nitrogen Oxides	( )
Volatile Organic Compounds	( )	Visible Emissions	(x)

15. Emissions tests are to be conducted for the following pollutants at intervals not to exceed 60 months following the date of initial compliance testing. All test reports must be submitted to the Air Division within 30 days of completion of testing.

Particulates	(x)	Carbon Monoxide	( )
Sulfur Dioxide	( )	Nitrogen Oxides	( )
Volatile Organic Compounds	( )	Visible Emissions	(x)

16. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

(a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

(b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

(c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

(d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

17. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

18. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

19. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

(a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

(b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

(c) by paving;

(d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

20. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

21. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

22. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

23. Reports to the Air Division of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with ADEM Admin. Code r. 335-3-16-.04(9).

24. The permittee shall submit an Annual Compliance Certification to the Air Division no later than 60 days following the anniversary of the issuance of this permit.

(a) The compliance certification shall include the following:

i) The identification of each term or condition of this permit that is the basis of the certification;

ii) The compliance status;

iii) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

iv) Whether compliance has been continuous or intermittent; and

v) Such other facts as the Department may require to determine the compliance status of the source.

(b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Planer Mill Operations
Summary Page

Description: Planer Quad Pack Cyclone (PLN1-QP)

High Efficiency Truck Bin Cyclone (PLN1-HEC)

Installation Date: February 2024

Operating Capacity: 80,000 lb/hr Planer Shavings

Operating Schedule: 24 hrs/day, 7 days/week, 52 weeks/yr

Pollutants Emitted:

Emission Point	Point Description	Pollutant	Emission Limit	Standard
PLN1-QP	Planer Quad Pack Cyclone	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for P < 30 TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	0.86 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
PLN1-HEC	High Efficiency Truck Bin Cyclone	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for P < 30 TPH Or $E = 17.31(P)^{0.16}$ for P $\geq$ 30 TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	0.37 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04

Planer Mill Operations Provisos

	Regulations
1) Applicability	
(a) These sources are subject to the applicable requirements of Rule 335-3-16-.03, "Major Source Operating Permits".	ADEM Admin. Code r. 335-3-16-.03
(b) These sources are subject to synthetic minor source limits to restrict the potential to emit below the significant emission rates for particulate matter (PM) established at ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration (PSD))".	ADEM Admin. Code r. 335-3-14-.04
2) Emission Standards	
(a) The permittee shall not cause or allow the emission of particulate matter (as TSP) in any one hour from any process in excess of the amount determined by the following equations: $E=17.31P^{0.16}$ (P≥30 TPH) $E=3.59P^{0.62}$ (P<30 TPH) Where: E = Emissions (in pounds per hour) P = Process weight (in tons per hour)	ADEM Admin. Code r. 335-3-4-.04
(b) The Permittee shall not cause or allow particulate matter to be emitted from PLN1-QP in excess of 0.86 lb/hr.	ADEM Admin. Code r. 335-3-14-.04
(c) The Permittee shall not cause or allow particulate matter to be emitted from PLN1-HEC in excess of 0.37 lb/hr.	ADEM Admin. Code r. 335-3-14-.04
(d) The Permittee shall not cause or allow particulate matter less than 10 microns to be emitted from PLN1-QPC and PLN-HEC in excess of 0.01 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(e) The Permittee shall not cause or allow particulate matter less than 2.5 microns to be emitted from PLN1-QPC and PLN-HEC in excess of 0.01 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(f) The Permittee shall not cause or allow visible emissions with a six-minute average opacity greater than 20% to be emitted more than once during any 60-minute period. The permittee shall not cause or allow visible emissions with a six-minute average opacity of greater than 40% to be emitted at any time.	ADEM Admin. Code r. 335-3-4-.01(1)

	Regulations
3) Compliance and Performance Test Methods and Procedures	
(a) Compliance with the particulate emission rates of these units shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.	ADEM Admin. Code r. 335-3-1-.05
(b) Compliance with the particulate matter less than 10 microns and 2.5 microns emission rates of these units shall be determined in accordance with 40 CFR Part 51, Appendix M, Methods 201A and 202.	ADEM Admin. Code r. 335-3-1-.05
(c) Compliance with the visible emissions from each unit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.	ADEM Admin. Code r. 335-3-1-.05
4) Emission Monitoring	
(a) The Permittee shall visually observe the emissions from the cyclones (while operating) a minimum of once each day during daylight hours.	ADEM Admin. Code r. 335-3-16-.05(c)1
(b) Whenever any visible emissions are observed, the Permittee shall take corrective action as soon as practicable but no longer than 24 hours from the time of the observation, followed by an additional observation to confirm there are no visible emissions observed from the applicable cyclone.	ADEM Admin. Code r. 335-3-16-.05(c)1
(c) The Permittee shall inspect and clean the pneumatic transfer systems and cyclones at least annually and whenever any visible emissions are observed from a cyclone.	ADEM Admin. Code r. 335-3-16-.05(c)1
5) Recordkeeping and Reporting Requirements	
(a) Records of emission monitoring performed shall be maintained on-site and include:	ADEM Admin. Code r. 335-3-16-.05(c)2
(i) The date, time, and results of each daily observation for any emissions from the cyclones and the name of the individual making the observation;	
(ii) The date(s), nature, and results of any corrective action taken when any emissions were observed from a cyclone;	
(iii) The date(s) the cyclones were inspected for proper operation and, if the results of the inspection indicated that cleaning or emissions-related maintenance was needed, the date(s) and nature of the cleaning/maintenance performed.	
(b) The Permittee shall retain all required records in a permanent form suitable and readily available for inspection for a period of five (5) years from the date of generation of each record.	ADEM Admin. Code r. 335-3-16-.05

	Regulations
(c) A Semiannual Monitoring Report, as required by General Permit Proviso No. 23, shall be submitted no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st). The report shall include the following information for this emission unit: (i) A statement as to whether all observation for any emissions were completed as required during the reporting period, and if not, the date(s) and reason(s) why the monitoring was not performed; (ii) A statement as to whether the annual inspections of the cyclones were accomplished during the reporting period, and if so, the date and results of the inspection; (iii) The date(s), nature, and results of any corrective action taken when (1) any emissions were observed or (2) an inspection of the cyclones indicated that cleaning or emission-related maintenance was needed.	ADEM Admin. Code r. 335-3-16-.05(c)3

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: NEW SOUTH LUMBER COMPANY

FACILITY NAME: BUCKS SAWMILL

LOCATION: BUCKS, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
503-S002-X004	Sawdust Pneumatic Systems and Silos: 1. Silo Cyclone 1 (SC01) 2. Silo Cyclone 2 (SC02)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

NEW SOUTH LUMBER COMPANY
BUCKS, ALABAMA
PERMIT NO. 503-S002-X004
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the

Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report shall include the probable cause of the said deviations, and any corrective actions or preventative measures that were taken.

11. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

12. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

13. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

14. Prior to a date to be specified by the Chief of the Air Division in the authorization to operate, emission tests are to be conducted by persons familiar with and using the EPA Sampling Train and Test Procedure as described in the Code of Federal Regulations, Title 40, Part 60, for the following pollutants. Written tests results are to be reported to the Air Division within 30 days of completion of testing.

Particulates	(x)	Carbon Monoxide	( )
Sulfur Dioxide	( )	Nitrogen Oxides	( )
Volatile Organic Compounds	( )	Visible Emissions	(x)

15. Emissions tests are to be conducted on at least one of the silo cyclones for the following pollutants at intervals not to exceed 60 months following the date of initial compliance testing. All test reports must be submitted to the Air Division within 30 days of completion of testing.

Particulates	(x)	Carbon Monoxide	( )
Sulfur Dioxide	( )	Nitrogen Oxides	( )
Volatile Organic Compounds	( )	Visible Emissions	(x)

16. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

(a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

(b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

(c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

(d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

17. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

18. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

19. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

(a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

(b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

(c) by paving;

(d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

20. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

21. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

22. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

23. Reports to the Air Division of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with ADEM Admin. Code r. 335-3-16-.04(9).

24. The permittee shall submit an Annual Compliance Certification to the Air Division no later than 60 days following the anniversary of the issuance of this permit.

(a) The compliance certification shall include the following:

i) The identification of each term or condition of this permit that is the basis of the certification;

ii) The compliance status;

iii) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

iv) Whether compliance has been continuous or intermittent; and

v) Such other facts as the Department may require to determine the compliance status of the source.

(b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Sawdust Pneumatic Systems and Silos
Summary Page

Description: Silo Cyclone 1 (SC01)

Silo Cyclone 2 (SC02)

Installation Date: February 2024

Operating Capacity: 38,933 TPY Sawdust

Operating Schedule: 24 hrs/day, 7 days/week, 52 weeks/yr

Pollutants Emitted:

Emission Point	Point Description	Pollutant	Emission Limit	Standard
SC01	Silo Cyclone 1	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for $P < 30$ TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	0.98 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
SC02	Silo Cyclone 2	Opacity	$\leq$ 20% as determined by six-minute average, with one six-minute period up to 40% in any one-hour period.	ADEM Admin. Code r. 335-3-4-.01
		PM	$E = 3.59(P)^{0.62}$ for $P < 30$ TPH Or $E = 17.31(P)^{0.16}$ for $P \geq 30$ TPH	ADEM Admin. Code r. 335-3-4-.04
		PM	0.98 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM10	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04
		PM2.5	0.01 lb/hr (SMS)	ADEM Admin. Code r. 335-3-14-.04

Sawdust Pneumatic Systems and Silos Provisos

	Regulations
1) <u>Applicability</u>	
(a) These sources are subject to the applicable requirements of Rule 335-3-16-.03, "Major Source Operating Permits".	ADEM Admin. Code r. 335-3-16-.03
(b) These sources are subject to synthetic minor source limits to restrict the potential to emit below the significant emission rates for particulate matter (PM) established at ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration (PSD))".	ADEM Admin. Code r. 335-3-14-.04
2) <u>Emission Standards</u>	
(a) The permittee shall not cause or allow the emission of particulate matter (as TSP) in any one hour from any process in excess of the amount determined by the following equations: $E=17.31P^{0.16}$ **(P≥30 TPH)** $E=3.59P^{0.62}$ **(P<30 TPH)** Where: E = Emissions (in pounds per hour) P = Process weight (in tons per hour)	ADEM Admin. Code r. 335-3-4-.04
(b) The Permittee shall not cause or allow particulate matter to be emitted from SC01 and SC02 in excess of 0.98 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(c) The Permittee shall not cause or allow particulate matter less than 10 microns to be emitted from SC01 and SC02 in excess of 0.01 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(d) The Permittee shall not cause or allow particulate matter less than 2.5 microns to be emitted from SC01 and SC02 in excess of 0.01 lb/hr (each).	ADEM Admin. Code r. 335-3-14-.04
(e) The Permittee shall not cause or allow visible emissions with a six-minute average opacity greater than 20% to be emitted more than once during any 60-minute period. The permittee shall not cause or allow visible emissions with a six-minute average opacity of greater than 40% to be emitted at any time.	ADEM Admin. Code r. 335-3-4-.01(1)
3) <u>Compliance and Performance Test Methods and Procedures</u>	
(a) Compliance with the particulate emission rates of these units shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.	ADEM Admin. Code r. 335-3-1-.05

	Regulations
(b) Compliance with the particulate matter less than 10 microns and 2.5 microns emission rates of these units shall be determined in accordance with 40 CFR Part 51, Appendix M, Methods 201A and 202.	ADEM Admin. Code r. 335-3-1-.05
(c) Compliance with the visible emissions from each unit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.	ADEM Admin. Code r. 335-3-1-.05
4) <u>Emission Monitoring</u>	
(a) The Permittee shall visually observe the emissions from the cyclones (while operating) a minimum of once each day during daylight hours.	ADEM Admin. Code r. 335-3-16-.05(c)1
(b) Whenever any visible emissions are observed, the Permittee shall take corrective action as soon as practicable but no longer than 24 hours from the time of the observation, followed by an additional observation to confirm there are no visible emissions observed from the applicable cyclone.	ADEM Admin. Code r. 335-3-16-.05(c)1
(c) The Permittee shall inspect and clean the pneumatic transfer systems and cyclones at least annually and whenever any visible emissions are observed from a cyclone.	ADEM Admin. Code r. 335-3-16-.05(c)1
5) <u>Recordkeeping and Reporting Requirements</u>	
(a) Records of emission monitoring performed shall be maintained on-site and include:	ADEM Admin. Code r. 335-3-16-.05(c)2
(i) The date, time, and results of each daily observation for any emissions from the cyclones and the name of the individual making the observation;	
(ii) The date(s), nature, and results of any corrective action taken when any emissions were observed from a cyclone;	
(iii) The date(s) the cyclones were inspected for proper operation and, if the results of the inspection indicated that cleaning or emissions-related maintenance was needed, the date(s) and nature of the cleaning/maintenance performed.	
(b) The Permittee shall retain all required records in a permanent form suitable and readily available for inspection for a period of five (5) years from the date of generation of each record.	ADEM Admin. Code r. 335-3-16-.05

	Regulations
(c) A Semiannual Monitoring Report, as required by General Permit Proviso No. 23, shall be submitted no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st). The report shall include the following information for this emission unit: (i) A statement as to whether all observation for any emissions were completed as required during the reporting period, and if not, the date(s) and reason(s) why the monitoring was not performed; (ii) A statement as to whether the annual inspections of the cyclones were accomplished during the reporting period, and if so, the date and results of the inspection; (iii) The date(s), nature, and results of any corrective action taken when (1) any emissions were observed or (2) an inspection of the cyclones indicated that cleaning or emission-related maintenance was needed.	ADEM Admin. Code r. 335-3-16-.05(c)3

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: NEW SOUTH LUMBER COMPANY

FACILITY NAME: BUCKS SAWMILL

LOCATION: BUCKS, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
503-S002-X005	700 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Fire Pump Engine (NSPS, JJJJ) Three (3) 750 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Generators (NSPS, JJJJ)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

NEW SOUTH LUMBER COMPANY
BUCKS, ALABAMA
PERMIT NO. 503-S002-X005
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate, reduce, or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the

Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report shall include the probable cause of the said deviations, and any corrective actions or preventative measures that were taken.

11. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

12. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

13. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

14. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

16. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

17. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

18. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. Reports to the Air Division of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with ADEM Admin. Code r. 335-3-16-.04(9).

22. The permittee shall submit an Annual Compliance Certification to the Air Division no later than 60 days following the anniversary of the issuance of this permit.

    (a) The compliance certification shall include the following:

        i) The identification of each term or condition of this permit that is the basis of the certification;

        ii) The compliance status;

        iii) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        iv) Whether compliance has been continuous or intermittent; and

        v) Such other facts as the Department may require to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Emergency Engines
Summary Page

Description: 700 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Fire Pump Engine (NSPS, JJJJ)

Three (3) 750 BHP, Combustion Ignition, Natural Gas-Fired Reciprocating Internal Combustion Emergency Generators (NSPS, JJJJ)

Operating Schedule: 500 hr/yr

Emission Limitations:

Emission Point No.	Description	Pollutant	Emission limit	Regulation
ENG-1	Emergency Fire Water Pump Engine	NOx	2.0 g/HP-hr (160 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		CO	4.0 g/HP-hr (540 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		VOC	1.0 g/HP-hr (86 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		CO_{2e}	134.9 TPY (BACT)	ADEM Admin. Code r. 335-3-14-.04
Emission Point No.	**Description**	**Pollutant**	**Emission limit**	**Regulation**
GEN-1 GEN-2 GEN-3	Emergency Generators	NOx	2.0 g/hp-h (160 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		CO	4.0 g/hp-h (540 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		VOC	1.0 g/hp-h (86 ppmvd @ 15% O_2)	ADEM Admin. Code r. 335-10-.02(88) 40 CFR Part 60, Subpart JJJJ
		CO_{2e}	144.5 TPY (BACT)	ADEM Admin. Code r. 335-3-14-.04

Emergency Engines

	Regulations
1) Applicability	
(a) These engines are subject to the applicable requirements of Rule 335-3-16-.03, "Major Source Operating Permits".	ADEM Admin. Code r. 335-3-16-.03
(b) These engines are subject to Best Available Control Technology (BACT) limits for volatile organic compounds (VOC) and greenhouse gases (as CO2e) established pursuant to the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]".	ADEM Admin. Code r. 335-3-14-.04
(c) Each of these engines is subject to synthetic minor source limits to restrict its potential to emit below the significant emission rates for carbon monoxide (CO) and oxides of nitrogen (NOx) established at ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration (PSD)).	ADEM Admin. Code r. 335-3-14-.04
(d) These engines are affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	40 CFR Part 63, Subpart ZZZZ
(e) These engines are subject to the applicable provisions of 40 CFR Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, and 40 CFR Part 60, Subpart A as specified in Table 3 to Subpart JJJJ.	ADEM Admin. Code r. 335-3-10-.03(88) and 40 CFR Part 60, Subpart JJJJ
2) Emission Standards	
(a) The Permittee shall not cause or allow the sum of emissions of nitrogen oxides (NOx) from any of these engines to exceed 2.0 g/HP-hr (160 ppmvd @ 15% O_2).	40 CFR §60.4233(e)
(b) The Permittee shall not cause or allow the emissions of carbon monoxides (CO) from any of these engines to exceed 4.0 g/HP-hr (540 ppmvd @ 15% O_2).	40 CFR §60.4233(e)
(c) The Permittee shall not cause or allow the emissions of volatile organic compounds (VOC) from any of these engines to exceed 1.0 g/HP-hr (86 ppmvd @ 15% O_2).	40 CFR §60.4233(e)
(d) The Permittee shall not cause or allow visible emissions with a six-minute average opacity greater than 20% to be emitted more than once during any 60-minute period. The permittee shall not cause or allow visible emissions with a six-minute average opacity of greater than 40% to be emitted at any time.	ADEM Admin. Code r. 335-3-4-.01

	Regulations
(e) The Permittee shall not cause or allow any of these engines to operate more than 500 hours during any 12-month consecutive period.	ADEM Admin. Code r. 335-3-14-.04
(f) The Permittee shall not cause or allow CO_{2e} to be emitted from GEN-1, GEN-2 and GEN-3 in excess of 144.5 TPY (each).	ADEM Admin. Code r. 335-3-14-.04
(g) The Permittee shall not cause or allow CO_{2e} to be emitted from ENG-1 in excess of 134.9 TPY.	ADEM Admin. Code r. 335-3-14-.04
3) Compliance and Performance Test Methods and Procedures	
(a) If testing is required, total particulate emissions from these engines shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 5.	ADEM Admin. Code r. 335-3-1-.05
(b) If testing is required, opacity of stack emissions shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.	ADEM Admin. Code r. 335-3-1-.05
(c) Any compliance or performance test required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.	ADEM Admin. Code r. 335-3-1-.05
(d) The Permittee shall purchase stationary natural gas-fired, internal combustion engines that are certified by the manufacturer to comply with the emission standards in 40 CFR Part 60, Subpart JJJJ, Table 1.	40 CFR §60.4243(b)(1)
(e) The Permittee shall operate and maintain these engines in accordance with the manufacturer's emission-related written instructions or in accordance with 40 CFR §60.4243(a)(2)(iii) over the life of the engines.	40 CFR §60.4243(a)
(f) The Permittee shall comply with the General Provisions outlined in Table 3 to Subpart JJJJ.	40 CFR §60.4246
4) Emission Monitoring	
(a) The Permittee shall install and operate a non-resettable hour meter on each engine.	40 CFR §60.4237(a)

	Regulations
(b) The Permittee shall not operate these engines except as provided in 40 CFR §60.4243, which includes but may not be limited to: (i) Emergency situations; (ii) A total of 100 hours per year or less for the purposes of maintenance checks and readiness testing, emergency demand response; and (iii) A total of 50 hours per year or less for the non-emergency situations allowed by 40 CFR §60.4243(d)(3); however, those 50 hours are counted towards the 100 hours per year allowed for maintenance checks and readiness testing, and emergency demand response.	40 CFR §60.4243
(c) The Permittee shall observe the visible emissions from these engines during daylight hours whenever an engine is operated during non-emergencies and readiness testing.	ADEM Admin. Code r. 335-3-16-.05(c)
(d) Whenever visible emissions are observed from an engine, the observer shall note the occurrence and notify the appropriate operations supervisor. The supervisor shall immediately investigate the cause of the visible emissions. If it is determined that the visible emissions are caused by operator error, operational procedures shall be modified to prevent a recurrence of the error. If the visible emissions are determined to be the result of mechanical failure, the engine shall be immediately repaired to return it to normal operation and ensure no visible emissions are noted from the engine.	ADEM Admin. Code r. 335-3-16-.05(c)
(e) Within 10 days of the end of each month, the Permittee shall calculate the operating hours of each engine for the previous month and previous 12-month period and determine compliance with the operational limits.	ADEM Admin. Code r. 335-3-16-.05
5) <u>Recordkeeping and Reporting Requirements</u>	
(a) The Permittee shall keep the following records for these engines in accordance with 40 CFR §60.4245. At a minimum, these records shall include: (i) Documentation from the manufacturer that the engines are certified to meet the emission standards; (ii) The date, time, duration, and purpose of operation each time an emergency engine is operated; and (iii) Records of all maintenance performed.	40 CFR §60.4245

	Regulations
(b) Records of emission monitoring performed shall be maintained in a permanent form on-site and include: (i) The date, time, and results of each observation for visible emissions and the name of the individual making the observation; (ii) The date(s), nature, and results of any corrective action taken when visible emissions were observed;	ADEM Admin. Code r. 335-3-16-.05(c)2
(c) The Permittee shall maintain records of the monthly and 12-month rolling total hours of operation for each engine and shall retain the information in a form suitable for inspection.	ADEM Admin. Code r. 335-3-16-.05
(d) The Permittee shall keep each required record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee shall keep each record readily accessible in hard copy or electronic form on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee may keep the records off site for the remaining 3 years.	ADEM Admin. Code r. 335-3-16-.05(c)
(e) A Semiannual Monitoring Report, as required by General Permit Proviso No. 21, shall be submitted no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st. This report shall include the following information for this unit: (i) A certification that all emission monitoring, proper maintenance, and operating practices were accomplished as required during the reporting period, and if not, describe the date and reason any required action was not accomplished; (ii) The monthly and 12-month rolling totals of the hours of operation of each engine during the reporting period.	ADEM Admin. Code r. 335-3-16-.05(c)3