Jaricus Whitlock

From: Bruce Ferguson <bferguson@fce-engineering.com>
Sent: Monday, March 13, 2023 8:16 AM
To: Jaricus Whitlock; Rodney Cuevas
Subject: Hardy Technologies PSD Application

Jaricus & Rodney,

Please find below links to the signed Hardy Technologies PSD application and modeling files. The application is to add a fourth kiln with dual fired nat gas/sawdust capability and to add the capability to burn wood residuals in one existing kiln.

I am getting 3 hard copies printed and will drop them off at MDEQ. If you need additional copies, please let me know. If you would rather me upload files to a MDEQ ftp, send me a link to upload. Let me know if you need additional information or have questions.

Thanks

Permit Application PDF
https://fce-engineering.sharefile.com/d-sddcfad18cd54427fb4d74fb4a5056216 [fce-engineering.sharefile.com]

Modeling Files
https://fce-engineering.sharefile.com/d-sb1075d5a6f8941ef98235fc1b5056755 [fce-engineering.sharefile.com]

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Hardy Technologies LLC
Lumberton Site

APPLICATION FOR A PREVENTION OF SIGNIFICANT DETERIORATION (PSD) AIR CONSTRUCTION PERMIT

HARDY TECHNOLOGIES LLC

LUMBERTON, MISSISSIPPI
LAMAR COUNTY

September 2022

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FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Contents

0. PURPOSE

Hardy Technologies LLC (Hardy) applied for the construction of a greenfield sawmill located at 115 Old Highway 11, Lumberton, Mississippi at Lumberton Industrial Park on December 23, 2020. The facility is classified under Standard Industrial Classification (SIC) Code 2421-sawmills and planing mills.

Hardy Technologies is a major source under the Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21) due to having a potential to emit more than 250 tons per year of a regulated NSR pollutant. Hardy requested federally enforceable limits in the initial issuance of the PSD permit. Furthermore, the facility will also be a major source under the Title V program, as defined under 11 Miss. Admin. Code Pt.2, Ch.6.

Hardy is requesting a modification to their current permit for the addition of: 1) a second saw line, 2) a new kiln equipped with a dual wood waste/natural gas burner, 3) the conversion of Kiln #3 (Emission Point AA-203) to a dual wood waste/natural gas burner , 4) increase of the maximum dry lumber throughput limit up to 400 MMBF/year, and 5) the removal of Emission Point AA-205, Planer Dry Chipper, as this emission point was not built.

Technical Conclusions
The following is a summary of the technical and regulatory conclusions that constitute this permit application:

- The facility has completed and certified construction of the site. It is a major source of PSD as permitted and will remain a major source of PSD after the proposed modifications are implemented. A PSD review has been conducted for volatile organic compounds (VOC), PM_{10}, $PM_{2.5}$.
- The facility is a major source of Hazardous Air Pollutants and subject to 40 CFR 63 Subpart DDDD National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Woods.
- The facility is proposing the addition of a second saw line (DDM8) to process smaller diameter logs; an additional kiln with a dual wood waste/natural gas burner, the conversion of Kiln # 3 burners (Emission Point AA-203) to a dual wood waste/natural gas burner.
- After the proposed modification, the facility will have a maximum throughput of 400 MMBF/year of lumber through the kilns.

Permit Request
The facility is requesting a permit to construct under MS Title 11, Part 2, Chapter 2, Rule 2.3.

The following is included in this application for permit review:

- Mississippi Consolidated Air Application (Appendix A)
- Emission Calculations (Appendix B)
- Emission Factor References (Appendix C)
- Figures (Appendix D)
- RBLC Report (Appendix E)

1. SITE DESCRIPTION

The Hardy Technologies LLC facility is located at 115 Old Highway 11, Lumberton, Mississippi, Lamar County Industrial Park in Lamar County. The facility falls under the Standard Industrial Classification (SIC) code of 2421 for general sawmills and planing mills. The location of the air emission sources on an aerial map, as well as a process flow diagram are illustrated in Figure 1-1 through Figure 1-3.

1.1 Sawmill and Planer Mill

Logs are received by truck at the facility and off loaded in log yard area until processed. Lumber production begins with the logs being sent to the debarker (AA-101) to remove the bark. Once the bark is removed, the logs go through the cut off saws to be cut to the desired lengths. Logs then enter the sawmill process (AA-103) and are cut into green dimensional lumber. The proposed second line (DDM8) will be used to process smaller diameter logs only. The sawmill operates a bark hog (AA-102) and a green chipper (AA-104), with the hogged bark, sawdust and chips mechanically conveyed to bunkers where material is loaded into haul trucks and transported offsite. The green lumber is then sorted, stacked, prior to entering the kilns. Once dried, the lumber will be transferred to the planer mill to be planed, graded, packaged, and placed in storage for loading and shipment. The planer transfer system will handle the residues (sawdust, shavings) from the planer mill, which will go through a baghouse equipped with a cyclofilter (AA-204) and then be mechanically conveyed for storage into the shaving truck bins (AA-207).

1.2 Continuous direct fired dry kilns (CDKs) AA-201, AA-202, AA-203 and proposed new kiln

Once the rough-cut green lumber is produced in the sawmill, it will be transferred to one of the four (4) continuous direct fired kilns. Moisture will be removed from the lumber prior to it being sent to the planer mill.

The facility plans to operate four (4) continuous direct fired kilns (CDKs); two equipped with 45 MMBTU/hr natural gas burners each (Emission Point AA-201, 202) and two equipped with dual wood waste/natural gas fired burners, also rated at 45 MMBTU/hr (Emission Point AA-203, and the proposed new kiln).

The combined maximum capacity of the CDKs after the proposed modifications will be 400 MMBF/year. The hourly production rates of each individual kiln can vary, depending upon the wood dimension and the weather conditions.

The continuous dry kilns feature dual tracks running parallel to each other. Lumber travels in opposite directions in a counterflow manner. The lumber entering the kiln

is preheated as it makes its way to the center of the kiln by heat from the lumber on the opposite track exiting the kiln.

1.3 Haul Roads

All haul roads (AA-301) in the facility are paved. Best management practices are in placed to reduce fugitive emissions from roads and high traffic areas. A vacuum truck is used daily to prevent fugitive dust from leaving the site.

1.4 Emergency Engine (AA-302)

The Lumberton facility has one diesel fired, fire water emergency pump (AA-302). The engine is certified to NSPS standards.

1.5 Fuel Storage Tanks

The facility originally permitted one tank (AA-303) to store fuel for the emergency fire water pump. The original permitted capacity for this tank was 10,000 gallons. The capacity of this installed tank is 550 gallons.
In addition, the facility is requesting the following tanks be included in the permit:

- 8,000 gallons diesel storage tank
- 550 gallons diesel storage tank
- 2,000 gallons gasoline storage tank

2. EMISSION CALCULATION METHODOLOGY

Major stationary source means any of the 28 source categories which emits or has the potential to emit 100 tons or more of any regulated NSR pollutant, any stationary source which emits 250 tons per year or more of a regulated NSR pollutant or any physical change that would occur at a stationary source not otherwise qualifying as a major stationary source if the changes would constitute a major stationary source by itself.

The Hardy Technologies facility is not one of the 28 source categories and the potential to emit for the facility is greater than 250 tpy of VOC. The facility is therefore a major source regarding the PSD regulations.

2.1 Sawmill Operations (Emission Points AA-101, AA-102, AA-103, AA-104)

Potential hourly and annual emissions have been calculated based on hourly and annual throughputs and the emission factors found in the U.S. EPA Region 10 Memo (May 8, 2014) *Particulate matter Potential to Emit Emission Factors for Activities at Sawmills, excluding Boilers, located in Pacific Northwest Indian Country.*

The ring debarker is fully enclosed, the merchandiser is partially enclosed, and the rest of the sawmill operations are under partial cover. The proposed second line will also be partially enclosed and will process those logs that are too small to be efficiently processed through the main saw line.

2.2 Continuous Direct Fired Kilns (Emission Points AA-201, AA-202, AA-203 and proposed new kiln)

Potential emissions for the continuous direct fired kilns were determined based on the maximum combined production capacity of the kilns (400 MMBF/year) as well as the combustion emissions from the natural gas burners and the dual burners based on the maximum heat input capacity.

Emissions from the lumber drying process are primarily naturally occurring volatile organic compounds. The air emissions move toward the open doorways at each end of the kilns. Prior to exiting the doors at the end of the kiln, most of the exhaust is extracted through powered vent exhaust stacks with a small portion exiting the entry and exit ends of the kilns. These emissions are dependent upon the type of wood being dried, size of the wood, the time of the year, operating conditions of the kiln, and the original and final moisture content of the wood.

The VOC emissions have been expressed as WPP1 as outlined in U.S. EPA guidance *Interim VOC Measurement Protocol for the Wood Products Industry- July 2007.*

Dry waste will be transferred via a cyclone to a fuel silo to be used as fuel for the two kilns equipped with dual burners.

2.3 Planer Mill Operations (Emission Points AA-204, AA-206, AA-207)

Planer shavings produced in the planer mill operation will be pneumatically conveyed to the shavings bin and collected using a cyclofilter. Emission factors used to determine the emissions from these operations were taken from U.S. EPA Region 10 Memo (May 8, 2014) *Particulate matter Potential to Emit Emission Factors for Activities at Sawmills, excluding Boilers, located in Pacific Northwest Indian Country, and manufacturer's specifications.*

2.4 Haul Roads (AA-301)

Fugitive particulate matter emissions from truck traffic on the facility roads were calculated based on the estimated vehicle miles travelled by the trucks bringing logs into the facility and transporting the final products out of the facility. Emission factors for paved roads dust were calculated using factors found in *U.S. EPA AP-42, Section 13.2.1 Paved Roads.*

2.5 Emergency Fire Water Pump (AA-302) and 500-gallon Diesel Fuel Tank (AA-303)

The pump will use diesel fuel and will not be operated more than 100 hours per year for non-emergency purposes such as readiness tests and maintenance.

2.6 Additional Tanks

The facility is proposing the addition of the following fuel tanks

- 8,000 gallons diesel storage tank
- 550 gallons diesel storage tank
- 2,000 gallons gasoline storage tank

3. PSD APPLICABILITY ANALYSIS

The facility was issued a PSD permit to construct on March 31, 2021, and construction of the site was certified on May 23, 2022. The proposed modification project includes an increase in the dried lumber throughput, the addition of a second sawmill line to handle the smaller diameter logs only, the removal of Emission Point AA-205 the planer dry chipper, as well as the addition of a new kiln with a dual burner and the conversion of kiln #3 to a dual natural gas/wood waste burner. The facility has been in operation for less than a **year, therefore** the emissions are being evaluated as if the site is a greenfield site.

3.1 Significant Emissions Increases

Significant emissions increase means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph 52.21(b)(23)) for that pollutant.

The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being modified; projects that only involve existing emissions units, projects that only involve construction of a new emissions unit(s) or projects that involve multiple types of emissions units.

As a greenfield site all the emission units are new units subject to the actual to potential test. Lumber drying is a bottleneck in the lumber production process. The potential emissions for the project are based on the future drying capacity of the kilns at 400 MMBF/yr.

The project emission increases are summarized below based upon proposed modifications. The project has potential emissions above the PSD significant emission rates for VOC, PM, PM_{10}, $PM_{2.5}$, and CO_{2e}.

Pollutant	PSD SER	Increase (TPY)	PSD (Y/ N)
PM	25	26.44	Y
PM_{10}	15	17.94	Y
$PM_{2.5}$	10	15.27	Y
SO_2	40	8.52	N
NO_x	40	25.42	N
CO	100	97.01	N
VOC	40	886.0	Y
Lead	0.6	0	N
CO_2e	75,000	105,850	Y

4. REGULATORY APPLICABILITY

This section summarizes all federally enforceable and state enforceable air regulations that will be applicable to the Project. Both applicable and important non-applicable regulations are addressed. Proposed compliance demonstration procedures are also discussed. Supporting process information for the proposed project is provided in the application forms contained in Appendix A.

Information contained on the application forms are provided for determining regulatory applicability and demonstrating compliance with applicable requirements, and should not be considered proposed permit terms, limits or conditions unless specifically expressed.

4.1 Federal Air Quality Regulations

The federal regulations applicable to the proposed project are National Emission Standard for Hazardous Air Pollutants (NESHAP) contained in 40 CFR 63, and Title V Operating Permit regulations contained in 40 CFR 70. Of note, there are no New Source Performance Standards (NSPS) that apply to direct fired continuous lumber dry kilns. A discussion of these applicable regulations, as well as key non-applicable regulations, is provided in this section.

4.1.1 Applicable Regulations

4.1.1.1 PREVENTION OF SIGNIFICANT DETERIORATION (PSD) (40 CFR 52)

Under the prevention of significant deterioration (PSD) requirements, all new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA) must undergo a preconstruction review consistent with Section 165 of the Act prior to beginning actual construction.

A "major stationary source" is defined as any one of 28 named source categories which has the potential to emit 100 tons per year (tpy) or more, or any other stationary source which has the potential to emit 250 TPY or more, of any pollutant regulated under the CAA.

Hardy Technologies LLC is not one of the listed source categories with a 100 tpy threshold; therefore, the major source threshold for the proposed facility is 250 tpy of any regulated NSR pollutant. Hardy Technologies LLC has the potential to emit VOC above the PSD threshold of 250 tpy. Therefore, the facility is classified as a PSD major stationary source and is subject to the PSD requirements.

4.1.1.2 NEW SOURCE PERFORMANCE STANDARDS (40 CFR 60)

New Source Performance Standards have been promulgated to govern the emissions of certain sources of air pollutants modified, constructed, or reconstructed after the applicability dates of the regulations.

4.1.1.2.1 40 CFR 60 SUBPART IIII STANDARD OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES (CI ICE)

This regulation applies to owners or operators of stationary CI ICE that commence construction, modification, or reconstruction after July 11, 2005, and to manufacturers of 2007 and later model year CI ICE.

The Hardy Technologies facility will use one emergency firewater pump engine (AA-013) that will be subject to this regulation.

4.1.1.3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (40 CFR 61 AND 63)

These emission standards are applicable to both major and area sources of hazardous air pollutants (HAPs). A major source of HAP is defined as having the potential to emit 25 tons/year or more of total HAP, or having the potential to emit 10 tons/year or more of an individual HAP. An area source does not meet these criteria.

4.1.1.3.1 40 CFR 63 SUBPART A GENERAL PROVISIONS

Any source subject to a NESHAP is also subject to the requirements outlined in Subpart A. These requirements generally specify submittal requirements for initial construction notification, initial startup notification, performance tests, performance test initial notification, general monitoring requirements, general recordkeeping requirements, semiannual monitoring and/or excess emission reports.

4.1.1.3.2 40 CFR 63 SUBPART DDDD NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR PLYWOOD AND COMPOSITE WOOD PRODUCTS

Lumber kilns are an affected source as listed in §63.2231 (a) and subject to this subpart. There is no compliance, operating, or work practice standards for lumber kilns under this subpart. Only an initial notification is required. The initial notification for kilns 1, 2, and 3 was submitted to MDEQ on May 23, 2022.

4.1.1.3.3 40 CFR 63 SUBPART ZZZZ NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)

This subpart applies to new, existing, and reconstructed stationary compression ignition (CI) and spark ignition (SI), emergency and non-emergency RICE located at a major and area sources of HAP emissions. Emission Point AA-013, the emergency firewater pump engine will be subject to this subpart.

4.1.1.4 COMPLIANCE ASSURANCE MONITORING (40 CFR 64)

Under 40 CFR Part 64, the Compliance Assurance Monitoring Regulations (CAM), facilities are required to prepare and submit monitoring plans for certain emission units with the Title V application. The CAM Plans provide an on-going and reasonable assurance of compliance with emission limits.

Under the general applicability criteria, this regulation only applies to emission units that use a control device to achieve compliance with an emission limit and whose pre-controlled emission levels exceed the major source thresholds under the Title V permitting program. For an emission unit whose post-controlled emissions are less than the major source emission thresholds, a CAM plan is required to be submitted with the first Title V permit renewal application.

There are no sources at the facility that employ a control device as defined in the CAM regulations, and therefore, 40 CFR Par 64 does not currently apply.

4.1.1.5 CHEMICAL ACCIDENT PREVENTION PROVISIONS (40 CFR 68)

Subpart B of 40 CFR 68 outlines requirements for risk management prevention plans pursuant to Section 112(r) of the Clean Air Act Applicability to this subpart is determined based on type and quantity of chemicals stored at the Mill. The amount of Section 112(r) substances stored at the facility do not trigger applicability of the risk management plan regulations of 40 CFR 68 Subpart B.

4.1.1.6 STRATOSPHERIC OZONE PROTECTION (40 CFR 82)

The requirements originating from Title VI of the Clean Air Act, entitled Protection of Stratospheric Ozone, are contained in 40 CFR 82. Subparts A through E, Subpart G, and Subpart H of 40 CFR 82 are not applicable to the Mill. 40 CFR 82 Subpart F, Recycling and Emissions Reduction, potentially applies if the facility operates, maintains, repairs, services, or disposes of appliances that utilize Class I or Class II ozone depleting substances. Subpart F requires persons completing the repairs, service, or disposal be properly certified. All repairs, service, and disposal of ozone depleting substances from subject appliances at the facility are completed by certified technicians.

4.2 Mississippi Air Quality Regulations

The following discusses MDEQ air quality control regulations and the applicability of these regulations to the emission sources at the Mill. Further information on source-specific regulations is provided below.

4.2.1 Applicable Federally Enforceable State Regulations

4.2.1.1 11 MISS. ADMIN. CODE PT. 2, R. 1.3.A. – SMOKE

Rule 1.3.A. allows startup opacity levels greater than 40% to no more than 15 minutes per startup in one hour and no more than three startups in any twenty-four-hour period. This regulation applies to the burners for the kilns.

4.2.1.2 11 MISS. ADMIN. CODE PT. 2, R. 1.3.B.- EQUIVALENT OPACITY

Rule 1.3.B. restricts visible emissions from stationary sources (not including uncombined water droplets) to less than 40 percent opacity. This regulation applies to the proposed continuous direct fired kilns, the sawmill operations, the planer mill operations, and the wood handling transfer cyclone and baghouse.

4.2.1.3 11 MISS. ADMIN. CODE PT.2, R. 1.3.D.- GENERAL NUISANCES

Rule 1.3.C. pertains to general nuisances from particulate matter emissions. Precautions are to be taken to reduce unnecessary emissions from handling, transport, or storage of materials. If particulate matter emissions cause a nuisance on adjacent property or violate a regulation, control measures may be imposed by MDEQ. This requirement is applicable to the handling of wood residuals and the emissions from road traffic.

4.2.1.4 11 MISS. ADMIN. CODE PT.2, R. 1.3.D(1)(B). FUEL BURNING

The natural gas burners for the kilns are subject to this requirement. The regulation limits particulate matter emissions to an emission rate not to exceed the emission rate determined by $E= 0.8808 * I^{-0.1667}$ where E is the emission rate in pound per million BTU her hour heat input and I is the heat input in millions of BTU per hour.

4.2.1.5 11 MISS. ADMIN. CODE PT.2, R. 1.3.F. – MANUFACTURING PROCESSES

Process emission sources are subject to Rule 1.3.F.(1). This regulation limits particulate matter emissions on the following equation, known as the process weight rule:

$$E = 4.1p^{0.67}$$

Where, E is the emission rate (lb/hr), and P is the process weight input rate (ton/hr).

MDEQ considers a process to consist of units that operate in sequential, direct, and relatively dependent fashion. For the facility the primary process is the lumber

manufacturing. The weight of the logs used in the process area would be considered the process weight input rate for emission units involved in lumber production.

4.2.1.6 11 Miss. Admin. Code Pt.2, R. 1.4.B.(1) -Sulfur Dioxide Emissions from Processes

Rule 1.4.B.(1) prohibits emissions of SO_2 in excess of 2000 parts per million by volume (ppmv) from existing process equipment and 500 ppmv from new process equipment. While this regulation applies to all process equipment, SO_2 emissions are negligible.

4.2.1.7 11 Miss. Admin. Code Pt.2, R. 1.4.B. (2) – Hydrogen Sulfide Emissions from Processes

Rule 1.4.B.(2) prohibits emissions of hydrogen sulfide in excess of 1 grain/100 standard cubic feet (set) from any gas stream. Although this regulation applies to all emission sources at the facility, there is no quantifiable hydrogen sulfide emissions from any emission source expected.

4.2.1.8 11 Miss. Admin. Code Pt.2, Ch. 5. -Requirements for PSD of Air Quality

Upon issuance of the construction permit for this permitting action, the facility will be a PSD major source and must evaluate PSD permitting applicability for all projects.

4.2.1.9 11 Miss. Admin. Code Pt.2, Ch. 6. Title V Operating Permit Regulations

Upon certification of construction, the facility will be considered a Title V source. Within 12 months, the facility is required to submit a timely and complete application for a Title V operating permit.

5. BEST AVAILABLE CONTROL TECHNOLOGY ANALYSIS

In accordance with PSD requirements listed in 40 CFR 51.166(J) and 52.21(J) and 11 Miss. Admin. Code Pt. 2, R. 5.1. a facility must apply Best Available Control Technology (BACT) for the control of each regulated air pollutant emitted in significant quantities from a new major stationary source or resulting from a major modification of an existing source located in an attainment area for that pollutant.

The proposed greenfield site in Lumberton will have the potential to emit Volatile Organic Compounds (VOC) more than 250 tons per year, therefore the facility is a major source under PSD.

The BACT requirements are intended to ensure that a proposed facility will incorporate air pollution control systems that reflect the latest demonstrated practical techniques for each particular emission unit and will not result in the exceedance of a National Ambient Air Quality Standard (NAAQS), PSD Increment, or other standards imposed at the State level.

BACT is an emission limit based on the maximum pollutant reduction achievable after consideration of energy, economic, and environmental impacts. BACT is determined by unit by pollutant. For this facility, BACT must be determined for the continuous direct fire kilns.

5.1 Top Down BACT Approach

EPA recommends a "top down" approach when evaluating available air pollution control technologies. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical source or source category. If it can be shown that this level of control is technically or economically infeasible for the unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until a control technology and associated emission level is determined that cannot be eliminated by any technical, environmental, or economic objections. The top down BACT evaluation process is described in U.S. EPA's draft document "New Source Review Workshop Manual" (U.S. EPA, October 1990).

The five steps involved in a top down BACT evaluation are:

Step 1. Identify all control technologies.
Step 2. Eliminate technically infeasible or unavailable technology options.
Step 3. Rank the remaining control technologies by control effectiveness.
Step 4. Evaluate the most effective controls and document the results; if the top option is not selected as BACT, evaluate the next most effective control option.

Step 5. Select BACT

When conducting the BACT analysis, one must include consideration of the most stringent technologies. Any decision to require a lesser degree of emissions reduction must be justified by an objective analysis of energy, environmental, and economic impacts. Furthermore, if a facility is subject to a New Source Performance Standard (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP), the minimum control efficiency to be controlled in a BACT analysis must result in an emission rate less than or equal to the NSPS and/or NESHAP emission rate.
The "top down" approach has been employed in this analysis to evaluate available pollution controls for the proposed process modification.

5.2 VOC BACT

5.2.1 CONTROL TECHNOLOGIES

Available control technologies for the control of VOC emissions were identified through research of the RACT/BACT/LAER Clearinghouse (RBLC), literature review, and surveying of previous applications submitted for continuous kilns. A review of these sources did not reveal any facilities that use add on controls for lumber drying kilns. However, a search was also conducted for VOC control technologies for other processes that could potentially be applied for a lumber dry kiln. The control technologies evaluated are combustion (thermal and catalytic), adsorption, biofiltration, condensation, wet scrubbing, and good work practices.

5.2.1.1 COMBUSTION

This technology may be applied using different approaches including regenerative thermal oxidation, or catalytic oxidation, boilers, and process heaters. VOC laden air streams are used as fuel sources and high VOC content streams can see destruction efficiencies as high as 99%; depending on the exact characteristic of the incoming air stream and the technology used.

Incineration has been successfully applied to aluminum chip dryers, petroleum processing and marketing operations, animal blood dryers, automotive brakeshoe debonding ovens, citrus pulp dryers, coffee roasters, wire enameling ovens, foundry core ovens, meat smokehouses, paint baking ovens, varnish cookers, paper printing and impregnating installations, pharmaceutical manufacturing plants, sewage disposal plants, chemical processing plants, and textile finishing plants.

5.2.1.2 THERMAL OXIDIZATION AND CATALYTIC OXIDATION

Regenerative Thermal Oxidizers or RTOs use a high-density media, such as ceramic-packed bed still hot from a previous cycle, to preheat an incoming VOC-laden waste gas stream. The preheated, partially oxidized gases then enter a combustion chamber where they are heated by auxiliary fuel (natural gas) combustion to a final oxidation temperature typically between 760 ^{o}C to 820 ^{o}C (1400 to 1500 ^{o}F). This temperature

is maintained to achieve maximum VOC destruction; however, temperatures of up to 1100 °C (2000 °F) may be achieved, if required, for very high control efficiencies of certain toxic VOC.

The 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 beds before the gases are exhausted to the atmosphere. The reheated packed bed then begins a new cycle by heating a new incoming waste gas stream.

A Regenerative Catalytic Oxidizer or RCO operates in the same manner as an RTO; however, it uses a catalyst material rather than ceramic material in the packed bed. This allows for destruction of VOC at a lower oxidation temperature. An RCO uses a precious metal catalyst in the packed bed, allowing oxidation to occur at approximately 400 °C (800 °F). The lower temperature requirement reduces the amount of natural gas needed to fuel the VOC abatement system and the overall size of the incinerator. Catalysts typically used for VOC incineration include platinum and palladium.

VOC destruction efficiency depends upon design criteria. Typical regenerative incinerator design efficiencies range from 59 to 99% for RTO systems and 90 to 99% for RCO systems, depending on system requirements and characteristics of the contaminated stream. Lower control efficiencies are generally associated with lower concentration flows.

5.*2.1.3* *ADSORPTION*

Adsorption is the use of a solid material to trap a gas. The material most used is carbon, a highly porous material. Adsorption occurs in two ways: (1) physical adsorption, in which van der Waal's forces attract and hold gas molecules to the adsorbent surface, and (2) chemical adsorption, in which gas molecules are chemically bonded to the adsorbent. Additionally, within the capillaries of the porous solid, surface adsorption is supplemented by capillary condensation. The VOC is usually recovered by stripping the organic from the carbon by heating with steam.

Activated carbon is the most widely used adsorbent for recovering VOC. Carbon adsorption is usually more economical than combustion for the control of organic compounds in low concentrations where the cost of supplemental fuel can be very high. Depending on the application, carbon adsorption efficiencies can be at least 95 percent. In addition, this control technique offers recovery of adsorbed organic which can be recycled to the process or used as fuel. Recovery and reuse have gained greater favor by industries.

Adsorption systems have been used successfully in the following industries: organic chemical processing, varnish manufacture, synthetic rubber manufacture, production of selected rubber products, pharmaceutical processing, graphic arts operations, food

production, dry cleaning, synthetic fiber manufacture, and some surface coating operations.

5.2.1.4 BIOFILTRATION

In biofiltration, off-gases containing biodegradable organic compounds are vented, under controlled temperature and humidity, through a biologically active material. The process uses a biofilm containing a population of microorganisms immobilized on a porous substrate such as peat, soil, sand, wood, compost, or numerous synthetic media. As an air stream passes through the biofilter, the contaminants in the air stream partition from the gaseous phase to the liquid phase of the biofilm. Once contaminants pass into the liquid phase, they become available for the complex oxidative process by the microorganisms inhabiting the biofilm.

5.2.1.5 CONDENSATION

Condensation is the physical change from the vapor to liquid phase. Condensers operate in either of two ways: (1) the most common is a constant pressure system where the temperature of the gas stream is reduced to cause the desired condensable materials to liquefy, or (2) less common is the technique of increasing the pressure of a gas stream to cause the combustible material to liquefy. Condensation is also commonly applied to a gas stream to reduce VOC concentrations before the stream is routed to the other "add-on" devices.

Condensers have been used successfully in bulk gasoline terminals, petroleum refining, petrochemical manufacturing, dry cleaning, degreasing, and tar dripping.

The VOC efficiency achieved by a condenser, as a sole add-on control device, is a function of 1) the heat capacity and temperature of the inlet exhaust stream, 2) the heat transfer characteristics of the condenser (including the heat transfer area and the heat transfer coefficient), and 3) the outlet temperature of the exhaust gas exiting the condenser.

Condensers are most effective in single component systems involving emission streams with a high percentage of a condensable VOC, because less heat must be removed from the exhaust gas to reduce the sensible heat of non-condensable gases and the required condenser temperature to achieve high levels of recovery. Unlike other VOC control devices for which quantifying control efficiency can require emissions testing, only the outlet exhaust gas temperature is required to estimate the VOC control efficiency of a condenser if the temperature, VOC concentration, and flow rate of the non-condensables in the inlet exhaust stream are all known. Since the control efficiency of a condenser is dynamic, based on the outlet temperature and inlet concentration of VOC in the exhaust stream, condensers exhibit a wide range of VOC control efficiency from as low as 50 percent to as high as 99 percent.

5.2.1.6 WET SCRUBBING

Scrubbing of gas or vapor pollutants from a gas stream is usually accomplished in a packed column (or other type of column) where pollutants are absorbed by countercurrent flow of a scrubbing liquid. Scrubbing liquid can be water, caustic solution, or other liquid media.

5.2.1.7 PROPER MAINTENANCE AND OPERATING PRACTICES

Proper maintenance and operating practices are comprised of work practice and operational standards and recordkeeping and reporting requirements. The establishment of these good operating practices is intended to minimize VOC emissions from the kilns to the extent practicable. 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 appropriate recordkeeping.

5.2.2 Control Technologies Eliminated Based on Feasibility

5.2.2.1 THERMAL OXIDATION AND CATALYTIC OXIDATION

Thermal oxidation is typically done with a regenerative thermal oxidizer (RTO). To achieve destruction and removal efficiency greater than 90%, a temperature of approximately 1500 °F is required and a minimum residence time of at least one second are required.

The exit temperature from the kilns would be well below this required temperature. Furthermore, the resinous nature of the VOCs released during the drying operation inside the kilns would cause issues with the duct work and media in the device over time. Due to the high moisture content, resinous characteristics of the VOCs released and low exit temperature in the exhaust stream, thermal oxidation technology is technically infeasible to be used in this process.

Oxidation can also be achieved with a Regenerative Catalytic Oxidizer (RCO). The required temperature to achieve the desired destruction efficiency inside the RCO is 500-800°F. Even though the temperature is lower than required for an RTO, it is still higher than the typical temperature from the kiln exhaust. As with the RTO, the resinous nature of the VOCs released during the drying operation would create fouling issues in the duct work and the catalyst media. Catalytic oxidation is therefore technically infeasible to be used in this process.

5.2.2.2 ADSORPTION

Activated carbon can be used to adsorb the VOC in into the activated carbon substrate. However, the high moisture content of the exhaust and its resinous nature would reduce the capacity and efficiency of the carbon. At high moisture content, the water

molecules and the VOC in the exhaust stream would compete for active adsorption site, rendering the system ineffective. Therefore, this control device is technically infeasible to be used in this process.

5.2.2.3 CONDENSATION

Condensation requires that the exhaust stream be cooled to a low enough temperature to allow for the VOC to go from a gas phase to liquid phase. The primary constituent of the VOC in the exhaust stream from the lumber kilns is terpenes, which would require the temperature of the exhaust stream to be lowered to well below 32 °F to have a low enough vapor pressure to use condensation. Temperatures this low would cause the water vapor in the stream to freeze, and the ice would clog the unit. As such, condensation is not a technically feasible control technology.

5.2.2.4 BIOFILTRATION

Microbial activity within the filter media is readily affected by temperature conditions. Mesophilic conditions (25-40^{o}C) are ideal for biofiltration operations and most biofilters consequently operate in ambient temperatures. Some microbes are known to function effectively in thermophilic conditions (40- 55^{o}C). In cases of extreme temperatures, cell components can begin to decompose and proteins within enzymes can become denatured and ineffective. The temperature of the exhaust stream from the kilns will be approximately 150 °F (65^{o}C) which exceeds the typical operational temperature of biofilters.

The primary constituent of the VOC in the exhaust stream is terpenes, which are highly viscous and would cause the biofilter to easily foul. Because of the nature of the long-chained hydrocarbons in the exhaust stream, a biofilter with a reasonable footprint/retention time, will have a reduced control efficiency. The microorganisms require a much longer retention time/size of a unit to provide an increased efficiency.

No installations of biofilters in lumber mills are known. Application of biofiltration technology for VOC removal from lumber kiln emissions has not been demonstrated. Due to the temperature requirement, the large land requirement, and the unproven ability of biofiltration to operate successfully for VOC removal from lumber kiln emissions, this control technology is considered technically infeasible.

5.2.2.5 WET SCRUBBING

While some VOCs that will be present in the exhaust stream are highly soluble in water, other VOCs, most notably α-pinene, are only very slightly soluble in water. Lower solubility VOCs would require much longer residence time within a scrubber packed column and would eliminate this as a technically viable solution for the constant stream that would need to be handled by a continuous kiln.

Wet scrubbing for VOC removal is also technically infeasible for application in drying kilns due to the disruption in air flow created by this type of add-on control. A vacuum

blower would be necessary to route kiln emissions to the wet scrubber. The installation of a vacuum blower would affect the temperature and moisture content of the kiln atmosphere and degrade the quality of the lumber product.

5.2.3 Ranking of Control Technologies

Since all add on control devices have been demonstrated to be technically infeasible for the kilns, proper kiln design and operation remains the only feasible option for control of VOC emissions.

5.2.4 Evaluation of Control Options

Based on the top-down BACT analysis, Hardy Technologies LLC has determined proper kiln design, maintenance, and good operating practices are the only feasible options that are both technically and economically sound.

A search of the RACT/BACT/LAER database for the 2010-2020 showed a range of limits or basis for limits between 3.5 and 5.8 lb/MBF of VOC. The variability is due in part on how the VOC determination was made, how the VOC is expressed, whether the value has been corrected by adding formaldehyde and methanol as well as the variation in VOC content of lumber throughout the year, based on temperature and moisture content.

A BACT emission limit of 4.43 lb/MBF as WPP1 was chosen from this range as it representative of the industry.

Hardy Technologies will follow this initial operation maintenance plan outlined below:

- Operation of the kilns in accordance with manufacturer's recommendations
- Routines for preventative maintenance will be as detailed in a monitoring plan based on manufacturer's recommendations. The plan will at a minimum identify the frequency of maintenance for the following activities:
    - Walk around inspection.
    - Wet bulb proper operation
    - Entrance/exit baffles inspection
    - Grease kiln cart wheels and fan shaft bearings
    - Check hydraulic oil levels
    - Calibration of moisture content equipment
    - Temperature probe calibration

5.3. PM/PM_{10}/$PM_{2.5}$ BACT

5.3.1 DRY KILNS

The transition of the lumber drying technology from batch kilns to continuous kilns has resulted in the reduction of particulate matter from the drying of wood. The reduction can be attributed to several factors. Waste heat from the dried wood is recovered and used to preheat the wood entering the kiln. The recovery of the waste heat results in less fuel burned per mass lumber dried, which would correspond to lower particulate matter emissions. The waste heat recovery also results in a decrease in the temperature of the gases exiting the kiln from about 225 ^{o}F for a batch kiln to 150 ^{o}F for continuous dry kilns. This reduction in temperature corresponds to the condensation and removal of a greater amount of water in the gas stream than in traditional kilns. Particulate matter is removed from the gas stream along with the condensate.

The trend toward the use of gasifier burners has also reduced particulate matter in that the gasifiers have less carryover of the fuel ash to the kiln which would have been discharged in the exhaust gas. In general, based on the literature review, emissions from continuous direct fired kilns appears to be 30% to 75% lower than traditional batch kilns with kilns utilizing gasifier burners resulting in the lower emissions.

5.3.1.1 CONTROL TECHNOLOGIES

Available control technologies for the control of PM emissions were identified through research of the RACT/BACT/LAER Clearinghouse (RBLC), literature review, and surveying of previous applications submitted for continuous kilns. A review of these sources did not reveal any facilities that use add on controls for lumber drying kilns. Potential control methods for particulate matter, in general, as described below were considered.

5.3.1.1.1 PROPER DESIGN AND OPERATION

The only PM control options identified in the RACT/BACT/LAER clearinghouse for dry kilns is proper operation. Ensuring that the manufacturer's recommendations are followed for the kiln burners will minimize PM formation and carry over. Minimizing over drying and proper kiln maintenance to prevent heat loss may reduce any excess fuel use and minimize emissions.

5.3.1.1.2 BAGHOUSE

A baghouse, or fabric filtration, is a common method of particulate emissions reduction. Typical new equipment design efficiencies are between 99 and 99.9%. Older existing equipment have a range of actual operating efficiencies of 95 to 99.9%. Several factors determine fabric filter collection efficiency. These include gas filtration velocity, particle characteristics, fabric characteristics, and cleaning

mechanism. In general, collection efficiency increases with increasing filtration velocity and particle size.

Fabric filters can perform very effectively in many different applications. Common applications of fabric filter systems with pulse-jet cleaning are for boilers, ferrous metals processing, mineral products processing, asphalt manufacture and grain milling.

5.3.1.1.3 ELECTROSTATIC PRECIPITATOR

Wet ESPs are used in situations for which dry ESPs are not suited, such as when the material to be collected is wet, sticky, flammable, explosive, or has a high resistivity. Also, as higher collection efficiencies have become more desirable, wet ESP applications have been increasing. Many older ESPs are of the wire-pipe design, consisting of a single tube placed on top of a smokestack (EPA, 1998). Wet pipe-type ESPs are commonly used by the textile industry, pulp and paper facilities, the metallurgical industry, including coke ovens, hazardous waste incinerators, and sulfuric acid manufacturing plants, among others, though other ESP types are employed as well.

5.3.1.1.4 VENTURI SCRUBBER

Venturi scrubbers have been applied to control PM emissions from utility, industrial, commercial, and institutional boilers fired with coal, oil, wood, and liquid waste. They have also been applied to control emission sources in the chemical, mineral products, wood, pulp and paper, rock products, and asphalt manufacturing industries; lead, aluminum, iron and steel, and gray iron production industries; and to municipal solid waste incinerators. Typically, venturi scrubbers are applied where it is necessary to obtain high collection efficiencies for fine PM. Thus, they are applicable to controlling emission sources with high concentrations of submicron PM.

5.3.1.2 CDK PM CONTROL TECHNOLOGIES ELIMINATED BASED ON FEASIBILITY

5.3.1.2.1 BAGHOUSE

Baghouses cannot be operated in moist environments; hygroscopic materials, condensation of moisture, or tarry adhesive components may cause crusty caking or plugging of the fabric or require special additives. Baghouses would not be feasible due to the large amounts of moisture in the exhaust gases.

5.3.1.2.2 ELECTROSTATIC PRECIPITATOR

Typical inlet concentrations to a wire-pipe ESP are 1 to 10 grams per cubic meter (g/m3) (0.5 to 5 gr/ft3). Particulate concentrations from the dry kilns are of the order of 0.01 g/m3. The lower concentration of particulate may result in lower efficiencies than the reported efficiency of 99 to 99.9%. Approximately 50% of the particulate matter is condensable which would not be recovered by the ESP. ESPs are also difficult to install in sites which have limited space since ESPs must be relatively large

to obtain the low gas velocities necessary for efficient PM collection. The facility is limited in space making an ESP impractical. The inlet concentration of filterable PM would be well below the typical inlet concentration for an ESP, the ESP would not recover condensable PM and an ESP has not been demonstrated on existing lumber kilns. The ESP was, therefore, determined to be infeasible.

5.3.1.2.3 VENTURI SCRUBBER

Venturi scrubbers PM collection efficiencies range from 70 to greater than 99 percent, depending upon the application. Collection efficiencies are generally higher for PM with aerodynamic diameters of approximately 0.5 to 5 μm. Some venturi scrubbers are designed with an adjustable throat to control the velocity of the gas stream and the pressure drop. Increasing the venturi scrubber efficiency requires increasing the pressure drop which, in turn, increases the energy consumption. Protection would need to be provided against freezing in the winter months and there is a high potential for corrosion problems.

Generally, venturi scrubbers are limited to control PM and high solubility gases and would be limited to filterable PM. The condensable fraction is approximately 50% of the particulate matter and would not be recovered by a venturi scrubber. Waste gas pollutant loadings for venturi scrubbers can range from 1 to 115 g/m3. The exit concentration of filterable PM from the kiln will be at approximately 0.01 g/m3. The inlet concentration will be well below that for a venturi scrubber, the scrubber will not remove the condensable fraction and a venturi scrubber has not been demonstrated on existing lumber kilns. The venturi scrubber was, therefore, determined to be infeasible.

5.3.1. 3 RANKING OF CONTROL TECHNOLOGIES

In the third step of the top-down analysis, remaining control technologies are ranked in order of effectiveness. Since add-on controls are infeasible for the kilns, proper kiln design and operation is the only remaining feasible control option.

5.3.1. 4 SELECTION OF BACT

Proper design and operation is the only remaining control option and was selected as BACT. The facility proposes to develop a good operating and maintenance practice plan for the continuous kilns and submit to the MDEQ within 6 months of kiln startup. The plan will include manufacturer's recommendations for maintaining the efficiency of the kiln. The plan will include items identified in Section 5.2.4 as well as regular maintenance identified to maintain the heat loss efficiency and manufacturer's recommendations on the kiln burner maintenance.

There is only one facility with PM limits on a continuous kiln with a green sawdust gasifier, Resolute FP US Inc, - Catawba Lumber Mill. The limits for this facility are proposed for BACT at 0.14 lb-PM/MBF, 0.104 lb-PM_{10}/MBF and 0.099 lb-$PM_{2.5}$/MBF. These limits are proposed for the kilns with green sawdust gasifiers.

The RACT/BACT/LAER PM limits for natural gas kilns varied as 0.33 lb/hr, 1.3 lb/hr and 0.022 lb/MBF. None of the limits indicated that they have been verified. The limits included in the application include a factor of 0.02 lb/MBF based on the Region 10 memo and the AP-42 factor for natural gas burning. These limits are requested as BACT for the natural gas burning kilns at 0.32 lb-PM/hr, 0.58 lb-PM_{10}/hr and 0.58 lb-$PM_{2.5}$/hr.

5.3.2 Residual Handling

The facility will generate wood residuals from debarking, sawing and planing. The residual material will be transferred to storage bins/sheds prior to shipment off-site and to silos for use as fuel. The material is transferred using pneumatic conveyors. Typically, cyclones and baghouses are used to separate the transferred material from the pneumatic transfer air are not considered pollution control devices.

5.3.2.1 CONTROL TECHNOLOGIES

5.3.2.1.1 CYCLONE

Cyclones are used to control PM, and primarily PM greater than 10 micrometers (μm) in aerodynamic diameter. However, there are high efficiency cyclones designed to be effective for PM less than or equal to 10 μm and less than or equal to 2.5 μm in aerodynamic diameter (PM10 and PM2.5). Although cyclones may be used to collect particles larger than 200 μm, gravity settling chambers or simple momentum separators are usually satisfactory and less subject to abrasion.

Control efficiency ranges for single cyclones are often based on three classifications of cyclone, i.e., conventional, high-efficiency, and high-throughput. The control efficiency range for conventional single cyclones is estimated to be 70 to 90 percent for PM, 30 to 90 percent for PM_{10}, and 0 to 40 percent for $PM_{2.5}$.

5.3.2.1.2 BAGHOUSE

A baghouse, or fabric filtration, is a common method of particulate emissions reduction. Typical new equipment design efficiencies are between 99 and 99.9%. Older existing equipment have a range of actual operating efficiencies of 95 to 99.9%. Several factors determine fabric filter collection efficiency. These include gas filtration velocity, particle characteristics, fabric characteristics, and cleaning mechanism. In general, collection efficiency increases with increasing filtration velocity and particle size.

Fabric filters can perform very effectively in many different applications. Common applications of fabric filter systems with pulse-jet cleaning are for boilers, ferrous metals processing, mineral products processing, asphalt manufacture and grain milling.

5.3.2.1.3 CYCLOFILTER

Recently facilities have been choosing to install a cyclofilter which is a combination of a cyclone and baghouse in one unit. The Cyclofilter can operate under both positive and negative pressure. The particle-laden air enters the dust filter through a tangent inlet; the particles are centrifuged down to the cone section where they are continuously collected by a pneumatic or mechanical system. The finer dust is captured upward in the filtering section using filter bags. The clean air is returned to the plant or to the atmosphere.

The particle-laden filter bags are cleaned continuously with an air-pulse jet system controlled by a sequential timer. The conception of the Cyclofilter reduces the upkeep of filter bags since the cyclonic pre-separator reduces to a minimum the dust load on the filter bags during the operation of the Cyclofilter.

5.3.2.2 CONTROL TECHNOLOGIES ELIMINATED BASED ON FEASIBILITY

5.3.2.2.1 BAGHOUSE

Baghouses cannot be operated in moist environments; hygroscopic materials, condensation of moisture, or tarry adhesive components may cause crusty caking or plugging of the fabric or require special additives. The moisture content of green sawdust is 50% making it infeasible to use a baghouse. The baghouse is considered feasible for the dry end planer shavings.

5.3.2.2.2 CYCLOFILTER

Because the cyclofilter is inclusive of a baghouse, it will have the same limitations. Due to the moisture content of green sawdust, it is infeasible to use a cyclofilter for the pneumatic transfer of the fuel. The cyclofilter is considered feasible for the dry end planer shavings.

5.3.2.2.3 CYCLONES

Cyclones have historically been used to transfer wood residuals pneumatically. A cyclone is feasible for both the fuel transfer and planer shavings transfer.

5.3.2.3 EVALUATION OF CONTROL OPTIONS

The remaining control option for pneumatic transfer of green sawdust fuel is a cyclone. The cyclofilter, baghouse and cyclone are control options for the transfer of planer shavings.

5.3.2.3.1 CYCLOFILTER

The cyclofilter would provide for the lowest emissions as it combines the efficiency of a cyclone and a baghouse. A CycloFilter was selected as BACT for the pneumatic transfer of dry planer residuals. Proposed emissions for the CycloFilter are 1.17 lb-PM/hr, 0.57 lb-PM_{10}/hr and 0.246 lb-$PM_{2.5}$/hr.

5.3.2.3.2 CYCLONES

A high efficiency cyclone is typical for the industry and was selected for the green sawdust fuel cyclones. Proposed emission limits for the cyclones are 0.2 lb-PM/BDT, 0.07 lb-PM10/BDT and 0.022 lb-$PM_{2.5}$/BDT.

5.4. CO_{2e} BACT

5.4.1 CONTROL TECHNOLOGIES

Only one facility was identified in the RACT/BACT/LAER database with CO_2 BACT limits based on energy efficient design.

5.4.1.1 CARBON CAPTURE SEQUESTRATION

Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. The EPA classifies CCS as an add-on pollution control technology that is "available" for facilities emitting CO_2 in large amounts.

5.4.1.2 ENERGY EFFICIENCY

EPA has emphasized the importance of energy efficiency improvements. No information on the energy efficiency criteria for dry kilns was found, however the EPA white paper "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Pulp and Paper Manufacturing Industry" does identify the following as options for boilers:

- Burner replacement
- Boiler process control
- Reduction of flue gas quantities
- Reduction of excess air
- Improved boiler insulation
- Boiler Maintenance
- Condensate return
- Minimizing boiler blow down
- Flue gas heat recovery

5.4.2 EVALUATION OF CONTROL OPTIONS

5.4.2.1 CARBON CAPTURE SEQUESTRATION (CCS)

Emissions of CO_{2e} requiring BACT for the proposed project result from the combustion of green sawdust and natural gas. The US EPA CO_2 CCS overview lists end uses of captured CO_2 as enhanced oil recovery (EOR), food and beverage manufacturing, pulp and paper manufacturing, and metal fabrication. Typical sources using CCS would include coal- and natural-gas-fired power plants and industry types

such as ethanol and natural gas processing plants. While the project does have potential CO2e emissions above the Significant Emissions Rate for CO2e, the facility does not emit large amounts. EPA generally considers a technology to be technically feasible if it has been successfully operated on the same type of source under review or is available and applicable to the source under review. No similar facilities were identified that have deployed carbon capture. This option was determined to be infeasible because it has not been demonstrated on existing lumber kilns.

5.4.2.2 ENERGY EFFICIENCY

Maintaining energy efficiency will minimize the fuel use and in turn minimize the generation of CO_2. The proposed kilns are designed with process control. The lumber is monitored for moisture content during operating to control the push rate and prevent over drying and under drying. The kilns are designed to recover the waste heat from the dried lumber, preheating the lumber prior to entering the drying chamber. The energy recovery reduces the temperature of the exhaust gas from approximately 225 ^{o}F to 150 ^{o}F prior to exhausting from the kiln. The kilns are insulated to prevent heat loss and maintenance is performed on the kilns in accordance with manufacturer's recommendations to keep them in proper operating condition.

5.4.3 SELECTION OF BACT

BACT was determined to be continuous direct fired kilns with proper maintenance and operation. The facility proposes to include in the good operating and maintenance practices plan items recommended by the manufacturer related to the energy efficiency such as:

- Maintenance of kiln insulation
- Kiln burner maintenance
- Process control maintenance.

6. SOURCE IMPACT ANALYSIS

The owner or operator of a proposed source or modification is required to demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), will not cause or contribute to air pollution in violation of: 1) any national ambient air quality standard in any air quality control region; or 2) any applicable maximum allowable increase over the baseline concentration in any area.

6.1 Existing Air Quality

Any application for a permit under the Prevention of Significant Deterioration program is required to contain an analysis of ambient air quality in the area that the major stationary source or major modification would affect for each of the following pollutants: a) for the source, each pollutant that it would have the potential to emit in a significant amount; b) for the modification, each pollutant for which it would result in a significant net emissions increase.

The pollutants under consideration in the analysis are volatile organic compounds (VOC), particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns ($PM_{2.5}$). The existing air quality is defined by the natural and human-generated sources of air pollution. The area surrounding the Lamar County facility is a mixture of developed and undeveloped land. Overall, the area is rural and in attainment for all regulated pollutants.

6.1.1 AIR QUALITY MONITORING REQUIREMENTS

The ambient air quality analysis is required to contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase. The source may be exempt from the preconstruction monitoring requirements if the air quality impacts are less than the monitoring de minimis concentrations. No de minimis air quality level is provided for ozone. However, any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of ambient air quality data.

There is not a de minimis monitoring concentration for $PM_{2.5}$, the facility is above the 100 TPY threshold for VOC and PM_{10} impacts are above the de minimis monitoring concentration. The comparison to de minimis concentrations is provided below.

Pollutant	Averaging Period	Monitoring de minimis Concentration ($\mu g/m^3$)	Modeled Concentration ($\mu g/m^3$)
PM_{10}	24-hour	10	15.43116
$PM_{2.5}$	24-hour	0	12.60544
Ozone		VOC or NOx emission increase < 100 TPY	NOx: 25.42 TPY VOC: 886 TPY

The facility is proposing to use existing air quality monitoring in lieu of conducting preconstruction monitoring. If there are no monitors located in the vicinity of the new or modifying source, a ''regional site'' may be used to determine background concentrations. A regional site is one that is located away from the area of interest but is impacted by similar or adequately representative sources. The proposed background monitors are discussed below. The monitored design values proposed as background are summarized in Table 6- 1.

6.1.1.1 $PM_{2.5}$

Monitor 28-035-0004 located in Hattiesburg is within the modeling domain, located approximately 37 km north of the project site. The NEI 2017 inventory was used to evaluate the point sources surrounding the monitor and the project site within 20 km. The summary of the comparison is included in Table 6- 2. It is noted that in the evaluation at this distance, the project site and monitor site share some of the same surrounding sources. The Cooperative Energy Purvis site is located 23 km from the project site, just outside the evaluated 20 km. If this source were included in the project location surrounding sources, the emissions from point sources surrounding the two locations would be virtually identical.

The Hardy project site and proposed monitor location are in adjacent counties. The 2017 NEI for nonpoint sources are grouped by county rather than coordinate location. A comparison of the nonpoint sources in Lamar County (project site) to Forrest County (monitor site) is included in Table 6- 3. The emissions of $PM_{2.5}$ from nonpoint sources is comparable in the same order of magnitude.

Given these comparisons, the proposed monitor is within the modeling domain and the proposed monitor is impacted by some of the same sources, the Hattiesburg monitor was determined to be representative of the project site for $PM_{2.5}$. Monitoring data from this site was used to account for nearby and distant surrounding sources of direct $PM_{2.5}$ as well as $PM_{2.5}$ from secondary formation from precursors emitted at existing facilities not considered to cause a significant impact gradient in the vicinity of the project.

6.1.1.2 PM_{10}

There is only one active PM_{10} monitor located in the State of Mississippi. Monitor 28-049-0020 is in Jackson, MS approximately 160 km NNE of the project location. The NEI 2017 inventory was used to evaluate the point sources surrounding the two locations within 20 km and to evaluate the nonpoint source emissions for the monitor

county and project site county. Table 6- 4 and 6- 5 show the comparison of the emissions. The PM_{10} emissions surrounding the Jackson monitor are an order of magnitude greater than the emissions surrounding the project site. The Jackson monitor was determined to provide a conservative estimate of the background emissions from nearby and distant sources.

6.1.1.3 OZONE

Monitored ozone levels for the southern half of the State of Mississippi are comparable ranging from 54 to 59 ppb. The Ozone monitor in Jackson, MS is proposed as a regional site representative of the project site. Table 6- 6 and 6- 7 summarize the point source and nonpoint source emissions surrounding the two locations. Precursor emissions surrounding the Ozone monitor are an order of magnitude larger around the monitor for point source emissions and approximately double for the nonpoint source emissions. The NOx:VOC ratio is, however, similar for both locations.

The Jackson monitor was determined to provide a conservative estimate of the ozone in the project area and is well below the ozone standard of 70 ppb.

6.1.2 SURROUNDING SOURCE INVENTORY

Typically, sources that cause a significant concentration gradient in the vicinity of the sources under consideration for emissions limits are not adequately represented by background ambient monitoring. The ambient contributions from these nearby sources are thereby accounted for by explicitly modeling their emissions. Sources of PM_{10} and $PM_{2.5}$ within 50 km of the project site were obtained from the MDEQ and from the LDEQ website. MDEQ allows the use of the "North Carolina 20D Rule" to screen out sources not considered to cause a significant gradient in the vicinity of the project. If the emissions from the surrounding source in TPY is greater than 20 times the distance from the project in km, the source is explicitly modeled. The 20D rule was used to screen out surrounding PM_{10} sources within 50 km of the project site.

Given the lower modeling significance level for $PM_{2.5}$ and that the 20D rule was established prior to the $PM_{2.5}$ standard, the criteria for retaining $PM_{2.5}$ sources was lowered by the ratio of the 24-hr modeling significance level of $PM_{2.5}$ to PM_{10}, or 4.8 for 24-hr avg period and 4 for the annual averaging period. The $PM_{2.5}$ source was retained if the emissions were greater than 4 times the distance to the project area in km. The $PM_{2.5}$ monitor is within the modeling domain. The distance of the surrounding source to the monitor was also determined. If the surrounding source was closer to the monitor than the project area, the monitor was considered to adequately account for the source and the source was not explicitly modeled. Table 6- 8 summarizes the screening procedure, identifying the sources explicitly modeled in the NAAQS analysis.

6.1.2.1 SECONDARY FORMATION OF $PM_{2.5}$

The ambient contributions from natural sources, other unidentified sources in the vicinity of the project, and regional transport contributions from more distant sources are typically accounted for through use of ambient monitoring data or, in some cases, regional scale photochemical grid modeling results.

Surrounding sources were evaluated for secondary formation of $PM_{2.5}$ based on the location of the surrounding source. For sources within 50 km of the project site, the secondary formation for the source was assessed if the source was retained to be explicitly modeled for $PM_{2.5}$ direct emissions.

For sources greater than 50 km from the project site, the distance to those sources was also compared to the distance from the respective source to the $PM_{2.5}$ monitor. Sources closer to the background monitor than the project site were presumed to be adequately addressed in the monitored background for the NAAQS analysis. For the remaining sources, the impacts in the Hardy project area were estimated based on the EPA Illustrative hypothetical single source modeled impacts of maximum daily average $PM_{2.5}$ concentrations provided by distance from the source. The EPA data was used to determine minimum and maximum dispersion coefficients from the surrounding MERPs sites: Arcadia Parish, Lincoln Parish, Orleans Parish, Smith County, Tallapoosa County and Bay County.

The dispersion coefficient is derived using Equation 2 of Section 4.1.3. of the "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program."

$$Project\ Impact = Project\ Emission\ Rate\ x\ \frac{Modeled\ air\ quality\ impact\ from\ hypothetical\ \ soure}{Modeled\ Emission\ rate\ from\ hypothetical\ source}$$

The modeled impact divided by the modeled emission rate for the hypothetical source is being termed as dispersion coefficient. This calculation was performed for each hypothetical scenario in the EPA "Illustrative hypothetical single source modeled impacts of maximum daily average $PM_{2.5}$ concentrations provided by distance from the source for the surrounding sources" at https://www.epa.gov/scram/merps-view-qlik for the hypothetical sources surrounding the Hardy project area. The minimum and maximum "dispersion coefficients" were determined for each hypothetical source at a distance. Table 6- 9 summarizes the derived dispersion coefficients. The dispersion coefficients for the nearest hypothetical source (Smith County) to the project area are also listed.

Maximum dispersion coefficients from the surrounding MERPs hypothetical sites were used to screen the distant sources (>50 km). Sources with the potential to impact the area above the 24-hr modeling significance level of 1.2 ug/m^3 were included in the 24-hr NAAQS analysis. Sources with the potential to impact the area above the annual modeling significance level of 0.2 ug/m^3 would be included in the

annual NAAQS analysis, however, no sources were found to impact the area above this threshold. The calculated precursor impacts from surrounding sources are summarized in Table 6- 10, and indicates if included in the analysis. The table also includes the secondary impacts based on the Smith Co hypothetical site which is in the same climatic division of the South Climate Zone and is the closest hypothetical site.

The NAAQS 24-hr precursor emission impacts identified in Table 6- 10 were included in the 24-hr analysis using an hourly background file. Impacts from the source were included in the background file if the wind direction in the meteorological file was within 15 degrees of the azimuth from the source to the Hardy facility. The background monitor design value, the maximum secondary formation from Hunt Oil Company and the secondary formation from the Hardy facility were included in each hour of the NAAQS background file. An example of the construction of the NAAQS background file is given in Table 6- 11. This method was chosen to account for secondary impacts at offsite sources during times when it is probable that the source is impacting the project area. Rather than add the secondary emissions to every hour, as is already being done with the background monitor, the distribution of emissions is added to the project area. Figure 6-5 illustrates the distribution of the calculated secondary emissions used in the hourly background file in a probability plot.

6.1.2.2 PSD INCREMENT

Emissions are determined to affect PSD increment based upon the baseline dates, summarized below. Changes in actual emissions at PSD major sources after the major source baseline date affect increment. As a major source the proposed project will consume both PM_{10} and $PM_{2.5}$ increment, since the major source baseline date for both pollutants has passed. The minor source baseline date for PM_{10} has passed and the surrounding sources modeled were considered to consume PM_{10} increment. The minor source baseline date has been set for $PM_{2.5}$.

Pollutant	Major Source Baseline Date	Minor Source Baseline Date
PM_{10}	January 6, 1975	April 30, 1982
$PM_{2.5}$	October 20, 2010	February 7, 2019

All sources of PM_{10} identified in Section 6.1.2 were assumed to consume PM_{10} increment as the minor source baseline date has been set for 40 years. These sources were screened using the 20D rule. The NAAQS analysis without adding the background monitor value was used to estimate the increment consumption of PM_{10}.

No minor source $PM_{2.5}$ changes after the minor source baseline date were identified. Changes at major sources after the major source baseline date affect increment. Changes in $PM_{2.5}$ impacts from secondary formation of precursor emissions also affect the $PM_{2.5}$ increment. $PM_{2.5}$ increment changes were evaluated by constructing

a baseline inventory which does not contain increment affecting emission changes and an increment inventory with the emission changes. This method is discussed in the preamble of the June 6, 2007, proposed rule "Refinement of Increment Modeling Procedures." Two approaches are discussed. One approach is to make a single model run after calculating the difference in emissions from the baseline date to the current period. An alternative approach is to make two model runs (one based on an inventory of baseline emissions and the second based on an inventory of current actual emissions) and calculate the difference between them.

Sources within 50 km were evaluated to determine if emission changes of direct $PM_{2.5}$ at the source affect the $PM_{2.5}$ increment. Additionally, the sources were evaluated to determine if changes in precursor emissions affect the $PM_{2.5}$ increment for sources within 50 km and those sources beyond 50 km identified in the NAAQS screening. Changes were identified at the following sources:

- Cooperative Energy Purvis, formerly SMEPA
- Leaf River Cellulose
- Rain II Carbon LLC
- International Paper – Bogalusa Mill
- Alabama Power Company, Barry Steam Plant
- Rain CII Carbon LLC - Gramercy Coke Plant
- Tokai Carbon CB Ltd - Addis Facility
- Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant
- Cabot Corp - Ville Platte Plant
- Louisiana Generating LLC - Big Cajun II Power Plant

The changes in direct emitted $PM_{2.5}$ resulted in a net increase for all the facilities within the modeling domain. The before and after emissions included in the model are summarized in Table 6- 12. The 2017 NEI actual emissions were included for the remaining sources both in the baseline inventory and the increment inventor (after) to assess the change.

There was large, permitted decreases in precursor emissions identified in the inventory. After the major source baseline date and prior to the minor source baseline date, the permitted net decreases in NO_x and SO_2 totaled 24,296 tpy and 109,119 tpy, respectively. After the minor source baseline date there were net decreases in permitted NO_x and SO_2 emissions of 5,600 tpy and 24,359 tpy respectively.

The actual changes in emissions for the facilities were evaluated at the respective dates to determine if the permitted decreases were realized. The adjustments to the baseline inventory for precursor emissions is summarized in 6- 13. The baseline emissions (2017/2018 Actuals) were adjusted by the actual decrease from the major source baseline date to the minor source baseline date corresponded to a permitted decrease in emissions. Permitted increases, to the extent that an actual increase was realized, were subtracted from the baseline inventory.

The emission changes after the minor source baseline date are also shown in Table 6-13. Although there were large decreases at Alabama Power and Cabot Corp, these changes are recent and would not be reflected in current actual emissions, so no adjustments were made for these emissions. The remaining changes were increases and these emissions were conservatively included in the current inventory.

Table 6- 14 summarizes the secondary impact estimates for the baseline inventory and the current inventory. The 24-hr impacts were used in the hourly background file included in the model. The source was assumed to impact the project area by this amount if the wind direction was within 15 degrees of the azimuth from the site. Based on the annual secondary impacts the annual increment in the project area has expanded by 0.1 to 0.2 ug/m^3 depending on the hypothetical source.

6.2 Dispersion Modeling

The dispersion modeling analysis consisted of a combination of direct source modeling using AERMOD and estimates of secondary formation of ozone and $PM_{2.5}$ using Modeled Emission Rates for Precursors (MERPs) at a distance. The methods used are summarized in this section below.

6.2.1 Direct Source Modeling

6.2.1.1 Dispersion Model

The direct source dispersion modeling was performed using the US EPA regulatory model AERMOD (v22112). The model was executed using the DFAULT control option to ensure that all regulatory default options were used. The model was set up and run using the 3rd party vendor program AERMOD-View.

6.2.1.2 Receptor Network

Receptors included in the modeling analysis were spaced as summarized below with receptor spacing based on the distance from the central point of the dry kilns using a cartesian coordinate system with the spacing expanded based on the radial distance from the central point. The spacing is depicted in Figure 6-1. Terrain and hill heights were assigned to the receptors using the preprocessor AERMAP (v18081). Areas of complex terrain, i.e., greater than lowest stack height, are illustrated in Figure 6-2. The spacing is adequate to capture any terrain impacts in the area.

To assess the necessity of a Class I demonstration, a significant impact run was performed using a polar receptor grid with 36 direction radials at 10-degree increments with receptors at 46, 48 and 50 km from the Hardy location.

Receptor Distance (km)	Receptor Spacing (m)
Fenceline	50
0-1	50
1-3	100
3-6	250
6-12	500
12-significant impact	1000

The significant impact area for both PM_{10} and $PM_{2.5}$ was within 100 meter spacing for the Class II analysis.

6.2.1.3 BUILDING DOWNWASH

A good engineering practice (GEP) evaluation was performed using US EPA BPIP-Prime (v04274). All stacks were found to be below GEP, and downwash parameters were incorporated into the modeling using BPIP-Prime. The location of point sources and buildings is illustrated in Figure 6-3. The building length and width were taken from shape files provided by the applicant and building heights were taken from the building plans.

The stack heights for the proposed kilns with green sawdust burners were raised to 55' from the standard design of 36'10" and the exit diameter was reduced to 28" from 32" to mitigate the effects of downwash.

6.2.1.3 METEOROLOGICAL DATA

The MDEQ maintains AERMOD ready preprocessed meteorological data. The John E Lewis Field in McComb, MS is in the same climate division as the proposed project. The two closest stations are the Bobby L Chain Municipal Airport and the Hattiesburg Laurel Airport both located in Hattiesburg, MS. The wind rose and frequency distributions for the three stations are shown in Figure 6-4. The Hattiesburg Laurel Airport does not have AERMINUTE data and has a high frequency of calms. Both the Bobby L Chain Airport and the John E Lewis Airport were determined to be representative of the project site. A comparison of the annual average surface characteristics for the two sites and the project site is summarized below. The John E Lewis Airport was selected for the analysis because it is in the same climate division and the surface roughness varied to a lesser extent for this station.

Aersurface Results								
Site			KMCB			KHBG		
Alb	Bo	Zo	Alb	Bo	Zo	Alb	Bo	Zo
0.15	0.45	0.228	0.15	0.53	0.079	0.15	0.49	0.044

6.2.1.4 SOURCE CHARACTERISTICS

Point Sources

The facility point sources were modeled with the parameters provided by the facility. The stack height for the new proposed CDK and existing CDK to be converted to green sawdust were adjusted to meet the modeled standards. The new fuel cyclones were modeled with parameters from similar facilities, as this equipment has not yet been selected. The short-term analysis used the maximum hourly emissions listed in Section B of the permit application. The permitted emission values provided in the surrounding inventory were used in the NAAQS analysis. The increment analysis used the actual emissions reported in the 2017 NEI database. Table 6- 15 summarizes the point sources included in the analysis. The firewater pump engine was not included in the analysis as the source is limited to 50 hours of operation for readiness testing, no more than 100 hours for non-emergency used inclusive of readiness testing and is not part of regular operations. The testing of the unit occurs for less than one hour.

Volume Sources

Volumes sources at the facility included in the modeling consisted of roads, fugitive emissions from equipment and material handling. The volume source parameters are summarized in Table 6- 16.

The road parameters were estimated based on a single lane of traffic, a truck height of 4 meters, a truck width of 3 meters and alternating volume sources. The width of the volume was taken as the width of the truck plus 6 meters. The initial sigma-Y was calculated as 2x(6 m+3m)/2.15. The volume height was determined as 1.7 x (truck height), with the sigma-Z being the volume height /2.15.

The fugitive equipment sources were based on the aerial extent of the equipment with Sigma-Y calculated as the side length/4.3. The fugitive sources are all located by structures. The release height was estimated as half the structure height and the initial sigma-z was estimated as the structure height/2.15.

6.2.2 SECONDARY IMPACTS

EPA has determined that advances in chemical transport modeling science indicate it is now reasonable to provide more specific, generally applicable guidance that identifies models or analytical techniques that may be used under specific circumstances for assessing the impacts of an individual or single source on ozone and secondary $PM_{2.5}$. For assessing secondary pollutant impacts from single sources, the degree of complexity required to appropriately assess potential impacts varies depending on the nature of the source, its emissions, and the background environment. EPA proposed a two-tiered demonstration approach for addressing single-source impacts on ozone and secondary $PM_{2.5}$. The first tier involves use of technically credible relationships between precursor emissions and a source's impacts. EPA released the "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under

the PSD Permitting Program" that provides a framework to develop MERPs for consideration and use as a Tier 1 demonstration tool, as described in the preamble of the 2017 Guideline.

The Final MERPs Guidance Webinar, June 13, 2019, outlined the process for a Tier 1 MERPs demonstration as:

1. Start with lowest, most conservative, illustrative MERPs for selected Climate Zone
2. Screen the closest hypothetical sources to the project facility and select the lowest, most conservative, MERPs
3. If selecting a nearby hypothetical source that is not the most conservative, the applicant should describe how the existing modeling reflects the formation of O_3 or $PM_{2.5}$ in that geographic area and is therefore most appropriate. Information that could be used to describe the comparability of two different geographic areas include:
    a. nearby local and regional sources of pollutants and their emissions (e.g., other industry, mobile, biogenics)
    b. rural or urban nature of the area
    c. terrain
    d. ambient concentrations of relevant pollutants where available
    e. average and peak temperatures
    f. humidity

This guidance was selected to determine the worst case MERPs for the evaluation of secondary formation of $PM_{2.5}$ and Ozone. Because the project site is on the eastern boundary of the South Climatic Zone, the closest hypothetical sites in the Southeastern Climatic Zone were also considered. Table 6- 17 summarizes the worst case MERPs for the South Climatic Zone, inclusive of the Tallapoosa, Autauga, and Bay County sites from the Southeast Climatic Zone. This table also summarizes the MERPs impacts for the facility using the Smith County hypothetical site and includes estimates for the Hunt Southland Oil facility which is located within the significant impact area.

The worst case MERPs were selected to estimate secondary impacts from the proposed source and surrounding sources within the significant impact area. For the sources outside of the significant impact area included in the analysis, the Illustrative hypothetical single source modeled impacts of maximum daily average PM2.5 concentrations provided by distance from the source were used to estimate the impacts in the project area. The worst case illustrative hypothetical MERP site surrounding the project site was used to estimate the impact from the source. The actual emissions from the 2017 NEI were used with the illustrative hypothetical MERP values to estimate impacts for the surrounding sources both within 50 km and greater than 50 kilometers from the project site in the NAAQS analysis.

6.3 Significant Impact Analysis

The single-source impact analysis was used to determine the area where the proposed facility has an ambient impact above the modeling significance levels. For pollutants and/or averaging periods with impacts below the modeling significance level, compliance is presumed, and no further analysis is required. The proposed facility was found to have significant impacts regarding PM_{10} and $PM_{2.5}$, and further analysis was required. The results of the modeling analysis, including the significant impact analysis are summarized in Table 6- 18.

6.3.1. SECONDARY FORMATION

As previously described, the secondary formation of ozone and $PM_{2.5}$ for the Hardy Technologies facility was estimated using the worst case MERP values for the South Climatic Zone. The calculated impacts are included in Table 6- 17 and were calculated as follows:

$PM_{2.5}$ 24-hr impact = (1.2 ug/m^3) [(Project NO_x TPY/1881 TPY) +(Project SO_2 TPY/274 TPY)
$PM_{2.5}$ Annual impact = (0.2 ug/m^3) [(Project NO_x TPY/6618 TPY) +(Project SO_2 TPY/1750 TPY)
Ozone 8-hr impact = (1 ppb) [(Project NO_x TPY/207 TPY) +(Project VOC TPY/2307 TPY)

The secondary impacts of $PM_{2.5}$ were added to the direct modeled impacts prior to comparing to the significant impact levels. Maximum ozone impacts were found to be 0.52 ppb which is below the 1 ppb significant impact level for ozone and no further analysis was conducted.

6.4 Cumulative Impact Analysis

The cumulative impact analysis included the Hardy Technologies facility and surrounding sources as described in Section 6.1.2 to determine the cumulative impacts of $PM_{2.5}$ and PM_{10} impacts.

6.4.1 NAAQS CUMULATIVE ANALYSIS

The NAAQS cumulative analysis included modeling of the project facility and surrounding sources determined to have the potential to cause a significant impact gradient in the vicinity of the facility. Additionally, representative monitoring data was added to the modeling results to account for distant and nearby sources not having a significant impact gradient in the vicinity of the project site. The surrounding sources within 50 km were assumed to have a significant impact in the project area if the Q/D emissions were greater than 20 for PM_{10} and greater than 4 for $PM_{2.5}$. $PM_{2.5}$ sources with emissions greater than the Q/D threshold and closer to the background monitor were determined adequately addressed by the background monitor and were not included in the modeling. An exception is the Cooperative Energy Purvis site, the natural gas turbines have been permitted but not operated and wouldn't be reflected in the monitoring. The modeled surrounding sources are identified in 6- 8. The modeled inventory is summarized in Tables 6- 19 and 6- 20. All sources were modeled at the maximum hourly emission rates for the 24-hour averaging period. The annual averaging period was modeled based on the annual emissions.

The estimate of secondary formation of $PM_{2.5}$ from the project emissions was also included in the analysis. For sources within 50 km, the secondary emissions were included if the source was retained for modeling the direct $PM_{2.5}$ emissions. For sources greater than 50 km, the source was included if the predicted maximum impact in the project area is greater than the modeling significance level, unless the background monitor is closer than the project site.

Secondary formation of $PM_{2.5}$ from the project and Hunt Southland Refining Company was calculated using the worst case MERPs as describe in Section 6.3.1. Impacts from Hunt Southland Refining Company were included using this method because the source is within the significant impact area. The secondary impacts from the remaining included sources were calculated based on the worst case of the surrounding MERPs hypothetical sites using the illustrative MERPs by distance. The impacts were included in the modeling using an hourly background file. The project impacts and Hunt Southland refining were included in each hour. The remaining sources were included if the wind direction was within 15 degrees of the azimuth from the project site to the source. The surrounding annual impacts as indicated in Table 6- 10 were added outside of the model.

6.4.1.1 RESULTS

The modeled impacts are summarized in Table 6- 18. The facility as proposed was found to be compliant with the PM_{10} and $PM_{2.5}$ 24-hr NAAQS. The maximum secondary impacts based on the Surrounding hypothetical sites as listed in Tables 6-10 and 6- 17 was used to account for the $PM_{2.5}$ secondary impacts. Based on these secondary impacts the facility is below the annual $PM_{2.5}$ annual NAAQS at the fence line.

The modeling demonstrates that as proposed the facility is compliant with the National Ambient Air Quality Standards (NAAQS).

6.4.2 PSD INCREMENT

The monitor proposed for the NAAQS analysis is within the modeling domain and is indicative of the $PM_{2.5}$ increment changes in the modeling domain. The MDEQ Air Quality Data Summaries indicate that the 24-hour $PM_{2.5}$ design value has decreased since the major source baseline date from 24 ug/m^3 in 2010 to 20 ug/m^3 in 2021. Over the same period, there has been a drop in the annual monitored $PM_{2.5}$ of about 2.6 ug/m^3. Large reduction in precursor emissions, discussed previously, in the area are also indicative of expansion of $PM_{2.5}$ in the project area.

Modeling of $PM_{2.5}$ increment was performed using two model runs with the increment calculated as the difference between the runs as previously discussed.

6.4.2.1 PM_{10} AND $PM_{2.5}$ DIRECT

The PM_{10} NAAQS modeling was used to demonstrate compliance with the PM_{10} increment. Based on the "20D" screening procedure, the only source with a significant impact gradient in the vicinity of the project area is Leaf River Cellulose. The PM_{10} NAAQS analysis without adding the background monitor was compared to the increment to determine compliance.

The $PM_{2.5}$ PSD increment analysis was performed using two model runs. Table 6-21 summarizes the surrounding sources used in the analysis. These sources were included in both modeling runs. The table lists the increment emissions included in the second run along with the facility emission sources. Emissions for those sources that have different baseline emissions included in the first run are summarized in Table 6-12.

6.4.2.2 $PM_{2.5}$ SECONDARY FORMATION

Secondary formation was accounted for in the hourly background file. Table 6- 14 identifies the secondary impacts from the surrounding sources for both the baseline (first run) and the increment inventory (second run) run. The hourly background file for the baseline run and increment run differ by the emission changes affecting the increment.

6.4.2.3 RESULTS

The results are summarized in Table 6- 18. The modeled impacts were found to be below the PM_{10} increment standards and the $PM_{2.5}$ annual PSD increment. The 24-hr increment was exceeded for one year when the minimum dispersion from the surrounding hypothetical sources was used. The model was rerun using the minimum dispersion for the Smith County site. This modeling demonstrated compliance with the $PM_{2.5}$ 24-hr increment for all years.

The modeling performed is conservative and demonstrates compliance with the PSD increment standards at the fence line. The $PM_{2.5}$ increment modeling is consistent with the expansion that has been seen at the Hattiesburg monitor.

6.5 Vegetation and Soils Impact

VOCs are regulated as precursors to tropospheric ozone. Elevated ground-level ozone concentrations can damage plant life and crop production. VOCs interfere with the ability of plants to produce and store food, making them more susceptible to disease, insects, or other pollutants and harsh weather. Ozone is formed by the interaction of NOx, VOC, and sunlight in the atmosphere. As the project potential for ozone formation due to emissions from the facility is insignificant, no adverse impacts on soils and vegetation are anticipated.

Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The secondary standards for PM_{10} and $PM_{2.5}$ are either equal to or greater than the primary standards. Modeling has shown compliance with the primary standards at the fence line and adverse impacts on vegetation and soils is not anticipated.

6.6 Associated Growth

The mill is currently operational employing approximately 135 people with most positions being filled from the local work force. No additional positions are anticipated from the addition of an additional continuous dry kiln and no associated growth is anticipated.

6.7 Class I Impact

The need to address air quality related values (AQRVs) in Class I areas is determined by the magnitude of the visibility impairing pollutants. The federal land manager guidance presumes that a project will have insignificant impacts if the maximum daily increase in visibility impairing pollutants expressed as tpy (Q)divided by the distance to the Class I in kilometers (D) is less than 10. The increase of visibility impairing pollutants due to the project is 55 tpy and the facility is 117 km from the nearest Class I area resulting in a Q/D of 0.47. This value is well below the Flag Guidance threshold of 10 and it is presumed that there are no issues with AQRVs and a Class I analysis on AQRVs is not necessary.

The impacts of PM_{10} and $PM_{2.5}$ were evaluated at the extent of the model, i.e., 50 km. The worst-case secondary impacts from the facility were added to the modeled impacts. Both PM_{10} and $PM_{2.5}$ were found to be well below the significance level and there is no need for the use of a long-range model to access impacts beyond the near field model.

Tables

Table 6-1 - Monitored Design Values		
MDEQ 2021 Air Quality Data Summary		
Pollutant	**Averaging Period**	**Background Value**
PM_{10}	24-hr	64 ug/m^3
$PM_{2.5}$	24-hr	20 ug/m^3
	Annual*	9.4 ug/m^3
Ozone	8-hr	57 ppb
EPA AirData Air Quality Monitors Hattiesburg $PM_{2.5}$ Monitor		
Year	**24-HR BLK AVG**	**24 HOUR**
2019	8.85	8.91
2020	9.67	8.49
2021	9.77	8.19
3-yr Avg.	9.43	8.53

** Report Varied listing 9.4 and 9.5 ug/m3. 9.4 value is used to correspond to the data reported on EPA AirData.*

Table 6-2 - Point Source Emissions (TPY) within 20 km of Project Site and Proposed PM2.5 Monitor

NAICS Description	Hattiesburg Monitor			Project Location		
	$PM_{2.5}$	SO_2	NO_X	$PM_{2.5}$	SO_2	NO_X
Airport Operations	5.42	3.94	36.23	0.41	0.06	0.31
All Other Petroleum and Coal Products Manufacturing	29.38	377.56	76.86	29.38	377.56	76.86
Asphalt Paving Mixture and Block Manufacturing	-	-	-	0.3	0.05	4.02
Fossil Fuel Electric Power Generation	17.93	20.44	233.96	-	-	-
Natural Gas Distribution	1.08	0.05	30.33	-	-	-
Other Engine Equipment Manufacturing	0.16	0.16	1.69	-	-	-
Pipeline Transportation of Natural Gas	-	-	-	0.01	0	0.67
Solid Waste Landfill	1.04	-	-	-	-	-
Support Activities for Rail Transportation	0.67	0.01	26.41	-	-	-
Synthetic Rubber Manufacturing	1.02	0.13	8.89	-	-	-
Totals	56.7	402.3	414.36	30.1	377.67	81.86

Source: 2017 NEI Database

Table 6-3 - Nonpoint Source Emissions (TPY) in Forrest County ($PM_{2.5}$ Monitor) and Lamar County (Project)

Sector	Forrest County			Lamar County		
	$PM_{2.5}$	SO_2	NO_X	$PM_{2.5}$	SO_2	NO_X
Agriculture - Crops & Livestock Dust	25.57			35.62		
Biogenics - Vegetation and Soil			299.03			316.33
Commercial Cooking	7.15			3.68		
Dust - Construction Dust	0.75			0.12		
Dust - Paved Road Dust	91.45			62.57		
Dust - Unpaved Road Dust	413.83			369.45		
Fires - Agricultural Field Burning	0.63	0.15	0.29			
Fuel Comb - Comm/Institutional - Biomass	2.55	0.14	1.25	1.49	0.08	0.74
Fuel Comb - Comm/Institutional - Natural Gas	0.05	0.07	11.69	0.03	0.04	6.85
Fuel Comb - Comm/Institutional - Other	0	0.01	1.76	0	0	1.03
Fuel Comb - Industrial Boilers, ICEs - Biomass	275.79	15.42	135.74	55.3	3.09	27.22
Fuel Comb - Industrial Boilers, ICEs - Natural Gas	0.61	0.85	140.85	0.12	0.17	28.25
Fuel Comb - Industrial Boilers, ICEs - Oil	0	0.02	0.01	0.18	0.17	0
Fuel Comb - Industrial Boilers, ICEs - Other	0	0	0.05	0	0	0.01
Fuel Comb - Residential - Natural Gas	0.09	0.12	18.82	0.04	0.05	7.99
Fuel Comb - Residential - Oil	0	0	0.01	0	0	0
Fuel Comb - Residential - Other	0	0.01	0	0.01	0.01	0
Fuel Comb - Residential - Wood	2.16	0.1	0.14	4.77	0.09	0.82
Industrial Processes - Mining	2.21			0		
Industrial Processes - Oil & Gas Production	0.18	0	0	0	0	0
Miscellaneous Non-Industrial NEC	0.02	0	0.4	2.37	0.01	0
Mobile - Locomotives	0.25	0	68.69	2.18	0.05	12.3
Waste Disposal	1.25	1.12	0.26	1.58	0.04	6.25
Totals	824.51	18.01	678.99	539.51	3.82	407.78

Source: 2017 NEI Database

6- 4 - Point Source Emissions (TPY) within 20 km of Project Site and Proposed PM10 Monitor		
NAICS Description	**Jackson Monitor**	**Project Site**
	PM_{10}	**PM_{10}**
Airport Operations	0.01	0.53
All Other Petroleum and Coal Products Manufacturing	-	31.01
Asphalt Paving Mixture and Block Manufacturing	-	0.3
Construction Sand and Gravel Mining	1.3	-
Electric Power Transmission, Control, and Distribution	9.98	-
General Medical and Surgical Hospitals	5.71	-
Iron and Steel Mills and Ferroalloy Manufacturing	25.03	-
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	2.06	-
Natural Gas Distribution	1.71	-
Pipeline Transportation of Natural Gas	1.79	0.01
Polish and Other Sanitation Good Manufacturing	39.33	-
Solid Waste Landfill	27.73	-
Support Activities for Rail Transportation	1.72	-
Totals	116.37	31.85

Source: 2017 NEI Database

6- 5 - Nonpoint Source Emissions (TPY) in Hinds County (PM_{10} Monitor) and Lamar County (Project)

Sector	Hinds County	Forrest County
	PM_{10}	PM_{10}
Agriculture - Crops & Livestock Dust	595.91	0.08
Commercial Cooking	71.60	0.89
Dust - Construction Dust	734.14	7.48
Dust - Paved Road Dust	793.65	365.80
Dust - Unpaved Road Dust	8,311.03	4,164.37
Fires - Agricultural Field Burning	-	1.35
Fuel Comb - Comm/Institutional - Biomass	9.69	2.95
Fuel Comb - Comm/Institutional - Natural Gas	0.20	0.06
Fuel Comb - Comm/Institutional - Other	0.02	0.01
Fuel Comb - Industrial Boilers, ICEs - Biomass	485.69	318.98
Fuel Comb - Industrial Boilers, ICEs - Natural Gas	1.12	0.73
Fuel Comb - Industrial Boilers, ICEs - Oil	0.11	0.08
Fuel Comb - Industrial Boilers, ICEs - Other	0.00	0.00
Fuel Comb - Residential - Natural Gas	0.60	0.10
Fuel Comb - Residential - Oil	0.00	0.00
Fuel Comb - Residential - Wood	0.02	0.01
Industrial Processes - Mining	0.00	17.66
Miscellaneous Non-Industrial NEC	0.00	0.00
Mobile - Locomotives	11.18	0.26
Waste Disposal	2.73	1.62
Totals	11,017.69	4,882.42

Source: 2017 NEI Database

6- 6 - Point Source Emissions (TPY) within 20 km of Project Site and Proposed VOC Monitor

NAICS Description	Jackson		Project Site	
	NO_X	VOC	NO_X	VOC
Airport Operations	0.01	0.01	0.31	0.68
All Other Petroleum and Coal Products Manufacturing			76.86	9.45
Asphalt Paving Mixture and Block Manufacturing			4.02	3.79
Construction Sand and Gravel Mining	8.23	0.42		
Electric Power Transmission, Control, and Distribution	375.49	6.97		
General Medical and Surgical Hospitals	22.81	1		
Iron and Steel Mills and Ferroalloy Manufacturing	83.68	14.86		
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	7.96	78.85		
Natural Gas Distribution	94.97	4.32		
Pipeline Transportation of Natural Gas	35.37	18.29	0.67	3.6
Polish and Other Sanitation Good Manufacturing	12.47	1.25		
Solid Waste Landfill	15.42	17.3		
Support Activities for Rail Transportation	65.7	4.3		
Totals	722.11	147.58	81.86	17.52
NOx:VOC	4.89		4.67	

Source: 2017 NEI Database

6- 7 - Nonpoint Source Emissions (TPY) in Hinds County (VOC Monitor) and Lamar County (Project)

Sector	Hinds County		Lamar County	
	NOX	VOC	NOX	VOC
Agriculture - Livestock Waste	-	3.25	-	0.85
Biogenics - Vegetation and Soil	534.33	19,638.22	316.33	11,983.02
Bulk Gasoline Terminals	-	105.50	-	-
Commercial Cooking	-	0.07	-	0.17
Fuel Comb - Comm/Institutional - Biomass	4.13	0.32	0.74	0.06
Fuel Comb - Comm/Institutional - Natural Gas	38.42	2.11	6.85	0.38
Fuel Comb - Comm/Institutional - Other	5.80	0.21	1.03	0.04
Fuel Comb - Industrial Boilers, ICEs - Biomass	206.68	15.97	27.22	2.10
Fuel Comb - Industrial Boilers, ICEs - Natural Gas	214.47	11.80	28.25	1.55
Fuel Comb - Industrial Boilers, ICEs - Oil	20.05	0.00	0.00	0.00
Fuel Comb - Industrial Boilers, ICEs - Other	0.07	0.00	0.01	0.00
Fuel Comb - Residential - Natural Gas	109.07	6.38	7.99	0.47
Fuel Comb - Residential - Oil	0.03	0.00	0.00	0.00
Fuel Comb - Residential - Other	11.50	0.00	0.00	0.00
Fuel Comb - Residential - Wood	0.72	0.41	0.82	11.47
Gas Stations	-	24.39	-	15.84
Industrial Processes - Oil & Gas Production	0.01	0.00	0.00	83.42
Industrial Processes - Storage and Transfer	-	5.38		1.04
Miscellaneous Non-Industrial NEC	0.08	0.26	0.00	0.38
Mobile - Locomotives	381.93	1.05	12.30	3.54
Solvent - Consumer & Commercial Solvent Use	-	22.63	-	60.11
Solvent - Degreasing	-	84.60	-	10.72
Solvent - Dry Cleaning	-	1.44	-	0.06
Solvent - Graphic Arts	-	184.42	-	71.38
Solvent - Industrial Surface Coating & Solvent Use	-	4.97	-	0.18
Solvent - Non-Industrial Surface Coating	-	282.67	-	72.44
Waste Disposal	26.32	2.01	6.25	0.10
Totals	1,553.58	20,398.07	407.78	12,319.32
NOx:VOC	0.08		0.03	

6- 8 - NAAQS Q/D Source Screening

Location			Latitude	Longitude	Distance (km)	PM10 Annual SID (km)		PM10 Daily SID (km)		PM2.5 Annual SID (km)			PM2.5 Daily SID (km)		
Hardy Technologies Lumberton			31.01	-89.44	0.00	1.00		0.82		1.61			2.69		
$PM_{2.5}$ Monitor			31.32	-89.29	37.57										
						PM_{10}				$PM_{2.5}$					
County	**Plant ID**	**Facility**	**Latitude**	**Longitude**	**Source Distance (km)**	**Emissions (TPY)**	**Daily Q/D**	**Annual Q/D**	**Include (Y/N)**	**Emissions (TPY)**	**Daily Q/D**	**Annual Q/D**	**Monitor Distance (km)**	**Adequately Covered by Monitor**	**Include (Y/N)**
035	00006	ZEON CHEMICALS L P	31.34	-89.31	38.31	2.33	0.06	0.06	N	2.33	0.06	0.06	3.11	Y	N
035	00023	**TENNESSEE GAS PIPELINE COMPANY LLC, PURV**	31.07	-89.30	14.68	69.67	4.74	5.09	N	**69.67**	**4.74**	**5.33**	**28.33**	**N**	**Y**
035	00050	GULF SOUTH PIPELINE COMPANY LLC, PETAL C	31.38	-89.26	44.36	8.80	0.20	0.20	N	8.8	0.20	0.21	6.80	Y	N
035	00117	KOHLER COMPANY HATTIESBURG ENGINE PLANT2	31.26	-89.26	32.44	1.21	0.04	0.04	N	1.21	0.04	0.04	7.51	Y	N
073	00006	RAIN CII CARBON LLC	31.18	-89.39	19.52	138.40	7.09	7.47	N	129.38	6.63	7.22	18.43	Y	N
073	**00011**	**HUNT SOUTHLAND REFINING COMPANY**	31.02	-89.45	1.95	2.56	1.31	2.69	N	**2.56**	**1.31**	**7.44**	**36.50**	**N**	**Y**
073	**00021**	**COOPERATIVE ENERGY, A MISSISSIPPI ELECTR***	31.21	-89.40	22.92	425.15	18.55	19.39	N	**329.25**	**14.36**	**15.45**	**16.03**	Y	**Y**
073	00030	TELLUS OPERATING GROUP LLC, BAXTERVILLE	31.07	-89.63	19.87	0.11	0.01	0.01	N	0	0.00	0.00	43.61	N	N
109	00039	TRANSAMERICAN WASTE CENTRAL LANDFILL IN	30.71	-89.60	37.15	69.59	1.87	1.92	N	9.98	0.27	0.28	74.69	N	N
111	**00005**	**LEAF RIVER CELLULOSE, LLC**	**31.24**	**-89.05**	**44.96**	**1,664.03**	**37.01**	**37.85**	**Y**	1664.03	37.01	38.38	24.53	Y	N
111	00008	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN	30.95	-89.03	39.33	17.35	0.44	0.45	N	17.35	0.44	0.46	48.30	N	N
131	**00003**	**HOOD INDUSTRIES INC, WIGGINS**	30.83	-89.12	36.10	558.67	15.48	15.92	N	**356.17**	**9.87**	**10.33**	**57.34**	**N**	**Y**
131	00004	FLORIDA GAS TRANSMISSION COMPANY, CARNES	30.90	-89.33	15.80	0.52	0.03	0.04	N	0.52	0.03	0.04	46.80	N	N
Louisiana Sites															
	17316	Hood Industries Inc - Bogalusa Sawmill	30.85	-89.85	43.21	39.85	0.92	0.94	N	35.61	0.82	0.86	74.92	N	N
	38936	**International Paper - Bogalusa Mill**	30.77	-89.83	45.84	244.812	5.34	5.46	N	**214.885**	**4.69**	**4.86**	**80.00**	**N**	**Y**
	9878	International Paper - Bogalusa Box Plant	30.78	-89.86	47.76	130.19	2.73	2.78	N	123.56	2.59	2.68	81.44	N	N
	166640	Chisos Pipeline Co LLC - Mardi Gras Midstream Florida Gas Station **	30.81	-89.85	45.30	29.32	0.65	0.66	N	29.32	0.65	0.67	78.10	N	N

** Does not include emissions from AA-001 and AA-002 which were shut down. The project was retained for modeling as the replacement natural gas turbines have not yet begun operation and wouldn't be reflected at the monitor.*

***PM2.5 not reported, assumed to be equal to PM_{10}*

Bolded sources explicitly modeled with bolded emissions.

Table 6-9 Maximum and Minimum Dispersion Coefficients [(ug/m^3)/(TPY)] for Hypothetical Sources at a Distance

	Max/Min of Smith Acadia, Orleans, Bay Co, Lincoln & Tallapoosa								Smith Co, Ms							
	Annual $PM_{2.5}$				Daily $PM_{2.5}$				Annual $PM_{2.5}$				Daily $PM_{2.5}$			
	NO_x		SO_2		NO_x		SO_2		NO_x		SO_2		NO_x		SO_2	
Distance	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
10	3.02E-05	1.45E-06	1.14E-04	7.43E-06	6.38E-04	6.38E-05	4.37E-03	2.78E-04	1.27E-05	2.34E-06	1.48E-05	7.43E-06	4.31E-04	6.38E-05	1.61E-03	3.85E-04
20	2.40E-05	1.22E-06	9.79E-05	6.08E-06	4.62E-04	3.65E-05	4.33E-03	2.33E-04	2.40E-05	3.86E-06	3.52E-05	1.50E-05	4.62E-04	9.22E-05	4.33E-03	3.84E-04
40	1.32E-05	1.15E-06	4.32E-05	5.12E-06	3.25E-04	2.84E-05	1.60E-03	2.97E-04	4.78E-06	3.40E-06	2.10E-05	1.14E-05	3.25E-04	9.22E-05	1.60E-03	3.15E-04
60	9.76E-06	1.28E-06	2.98E-05	4.00E-06	2.21E-04	3.03E-05	1.03E-03	2.28E-04	3.70E-06	2.92E-06	1.25E-05	7.90E-06	2.21E-04	9.07E-05	7.17E-04	2.28E-04
80	4.58E-06	8.80E-07	1.78E-05	3.27E-06	1.58E-04	3.86E-05	6.55E-04	1.66E-04	2.87E-06	2.41E-06	8.08E-06	5.61E-06	1.24E-04	8.96E-05	3.76E-04	2.26E-04
100	3.13E-06	9.09E-07	1.25E-05	3.00E-06	1.41E-04	4.19E-05	4.48E-04	1.53E-04	2.44E-06	2.01E-06	6.59E-06	4.74E-06	1.06E-04	8.40E-05	3.12E-04	2.14E-04
120	2.60E-06	8.26E-07	1.08E-05	2.40E-06	1.17E-04	2.42E-05	3.43E-04	1.29E-04	1.68E-06	1.32E-06	4.60E-06	3.55E-06	9.68E-05	7.54E-05	2.46E-04	1.86E-04
140	1.98E-06	6.70E-07	8.66E-06	1.97E-06	1.13E-04	1.92E-05	3.06E-04	1.10E-04	1.23E-06	1.05E-06	3.47E-06	2.80E-06	9.72E-05	7.06E-05	1.87E-04	1.47E-04
160	1.81E-06	6.13E-07	7.11E-06	1.78E-06	1.02E-04	2.01E-05	2.75E-04	1.04E-04	9.86E-07	8.67E-07	2.95E-06	2.45E-06	8.74E-05	6.07E-05	1.64E-04	1.32E-04
180	1.67E-06	5.51E-07	6.38E-06	1.42E-06	6.94E-05	2.89E-05	2.12E-04	8.88E-05	8.14E-07	6.77E-07	2.34E-06	2.00E-06	6.94E-05	5.13E-05	1.25E-04	1.07E-04
200	1.56E-06	5.47E-07	5.26E-06	1.21E-06	6.00E-05	2.00E-05	1.76E-04	7.46E-05	7.99E-07	6.70E-07	2.05E-06	1.79E-06	6.00E-05	4.21E-05	1.14E-04	8.60E-05
220	1.49E-06	4.29E-07	4.37E-06	1.11E-06	5.51E-05	1.59E-05	1.49E-04	6.50E-05	7.55E-07	6.12E-07	1.90E-06	1.67E-06	5.51E-05	3.96E-05	9.63E-05	7.70E-05
240	1.39E-06	3.44E-07	3.99E-06	9.32E-07	4.77E-05	1.44E-05	1.18E-04	5.86E-05	6.27E-07	4.99E-07	1.65E-06	1.45E-06	4.77E-05	3.43E-05	8.31E-05	6.72E-05
260	1.32E-06	4.00E-07	3.34E-06	7.99E-07	4.52E-05	1.24E-05	1.11E-04	4.99E-05	5.61E-07	4.58E-07	1.55E-06	1.38E-06	4.52E-05	3.30E-05	7.72E-05	6.18E-05
280	1.27E-06	3.40E-07	3.00E-06	7.51E-07	4.05E-05	1.20E-05	1.05E-04	4.39E-05	5.22E-07	4.16E-07	1.38E-06	1.23E-06	4.05E-05	3.10E-05	6.74E-05	5.89E-05
300	1.22E-06	2.36E-07	2.65E-06	6.98E-07	3.76E-05	1.16E-05	9.82E-05	3.61E-05	5.15E-07	4.09E-07	1.21E-06	1.09E-06	3.76E-05	3.27E-05	6.10E-05	5.40E-05

6- 10 - Precursor Source Screening (2017 NEI Emissions & Worst Case Surrounding MERP Hypothetical Sources)

site name	Azimuth	Project Distance (km)	Monitor Distance (km)	Monitor Adequate?	NO_X (TPY)	SO_2 (TPY)	24-hr NAAQs Impact (ug/m3)	Included in 24-hr NAAQS?	NAAQs Annual (ug/m3)	Included in Annual NAAQS?
HUNT SOUTHLAND REFINING COMPANY	326.46	1.95	36.50	FALSE	4.02	0.05	**0.0028**	**Y**	**0.0001**	**Y**
Tennessee Gas Pipeline Company LLC, Purvis Compressor Station Number 534	63.84	14.77	28.29	FALSE	0.67	0.00	**0.0004**	**Y**	**0.0000**	**Y**
Florida Gas Transmission Company, Carnes Compressor Station	138.59	15.78	46.78	FALSE	40.18	0.08	0.0258	N	0.0012	N
RAIN CII CARBON LLC	14.28	19.52	18.42	TRUE	76.86	31.01	1.7001	N	0.0455	N
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	10.03	23.44	15.45	TRUE	661.00	20.44	**0.3940**	**Y**	**0.0179**	**Y**
KOHLER COMPANY, HATTIESBURG ENGINE PLANT	28.96	32.61	6.47	TRUE	1.69	0.16	0.0015	N	0.0001	N
HOOD INDUSTRIES INC, WIGGINS	124.35	36.10	57.33	FALSE	112.07	4.99	**0.0734**	**Y**	**0.0032**	**Y**
Transamerican Waste Central Landfill Inc, Central Landfill Facility	204.21	36.59	74.14	FALSE	0.18	9.80	0.0003	N	0.0000	N
ZEON CHEMICALS L P	17.52	38.47	3.21	TRUE	8.89	1.02	0.0047	N	0.0002	N
Florida Gas Transmission Company, Wiggins Compressor Station, Number 10	99.94	39.33	48.30	FALSE	1,039.07	12.07	0.5090	N	0.0256	N
Hood Industries Inc - Bogalusa Sawmill	243.78	44.00	76.28	FALSE	2.40	73.03	0.0076	N	0.0002	N
GULF SOUTH PIPELINE COMPANY LLC, PETAL C	22.14	44.36	6.80	TRUE	30.33	1.08	0.0099	N	0.0004	N
Leaf River Cellulose LLC	54.93	45.44	24.60	TRUE	1,332.56	279.32	0.5429	N	0.0206	N
International Paper - Bogalusa Mill	237.23	47.80	81.46	FALSE	1,350.06	501.45	**1.2410**	**Y**	**0.0395**	**Y**
International Paper - Bogalusa Box Plant	236.83	47.94	81.68	FALSE	1.44	8.48	0.0005	N	0.0000	N
Alabama Power Company	89.91	135.51	126.17	TRUE	2,548.13	4,220.12	1.7442	N	0.0524	N
Rain CII Carbon LLC - Gramercy Coke Plant	228.27	158.84	193.28	FALSE	391.08	6,087.28	**1.9054**	**Y**	0.0535	N
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	255.07	178.60	203.47	FALSE	739.92	15,472.50	**4.3351**	**Y**	0.1113	N
Louisiana Generating LLC - Big Cajun II Power Plant	260.77	186.80	208.84	FALSE	4,010.57	13,907.83	**3.2269**	**Y**	0.0954	N
Tokai Carbon CB Ltd - Addis Facility	247.21	191.70	219.85	FALSE	306.73	7,074.42	**1.5211**	**Y**	0.0456	N
Cabot Corp - Ville Platte Plant	264.56	270.18	289.50	FALSE	936.74	11,028.20	**1.2668**	**Y**	0.0380	N
							Total Annual Contribution =		0.0607	**ug/m^3**

6- 10 - Precursor Source Screening (2017 NEI Emissions & Smith County MERP Hypothetical Source)

site name	Azimuth	Project Distance (km)	Monitor Distance (km)	Monitor Adequate?	NOX (TPY)	SO_2 (TPY)	24-hr NAAQs Impact (ug/m3)	Included in 24-hr NAAQS?	NAAQs Annual (ug/m3)	Included in Annual NAAQS?
HUNT SOUTHLAND REFINING COMPANY	326.46	1.95	36.50	FALSE	4.02	0.05	**0.0020**	**Y**	**0.0001**	**Y**
Tennessee Gas Pipeline Company LLC, Purvis Compressor Station Number 534	63.84	14.77	28.29	FALSE	0.67	0.00	**0.0003**	**Y**	**0.0000**	**Y**
Florida Gas Transmission Company, Carnes Compressor Station	138.59	15.78	46.78	FALSE	40.18	0.08	0.0174	N	0.0005	N
RAIN CII CARBON LLC	14.28	19.52	18.42	TRUE	76.86	31.01	0.6427	N	0.0066	N
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	10.03	23.44	15.45	TRUE	661.00	20.44	**0.7470**	**Y**	**0.0195**	**Y**
KOHLER COMPANY, HATTIESBURG ENGINE PLANT	28.96	32.61	6.47	TRUE	1.69	0.16	0.0015	N	0.0000	N
HOOD INDUSTRIES INC, WIGGINS	124.35	36.10	57.33	FALSE	112.07	4.99	**0.0734**	**Y**	**0.0029**	**Y**
Transamerican Waste Central Landfill Inc, Central Landfill Facility	204.21	36.59	74.14	FALSE	0.18	9.80	0.0003	N	0.0000	N
ZEON CHEMICALS L P	17.52	38.47	3.21	TRUE	8.89	1.02	0.0047	N	0.0002	N
Florida Gas Transmission Company, Wiggins Compressor Station, Number 10	99.94	39.33	48.30	FALSE	1,039.07	12.07	0.5090	N	0.0252	N
Hood Industries Inc - Bogalusa Sawmill	243.78	44.00	76.28	FALSE	2.40	73.03	0.0076	N	0.0001	N
GULF SOUTH PIPELINE COMPANY LLC, PETAL C	22.14	44.36	6.80	TRUE	30.33	1.08	0.0099	N	0.0001	N
Leaf River Cellulose LLC	54.93	45.44	24.60	TRUE	1,332.56	279.32	0.5429	N	0.0078	N
International Paper - Bogalusa Mill	237.23	47.80	81.46	FALSE	1,350.06	501.45	**1.2410**	**Y**	**0.0170**	**Y**
International Paper - Bogalusa Box Plant	236.83	47.94	81.68	FALSE	1.44	8.48	0.0005	N	0.0000	N
Alabama Power Company	89.91	135.51	126.17	TRUE	2,548.13	4,220.12	1.2838	N	0.0237	N
Rain CII Carbon LLC - Gramercy Coke Plant	228.27	158.84	193.28	FALSE	391.08	6,087.28	**1.1792**	**Y**	0.0216	N
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	255.07	178.60	203.47	FALSE	739.92	15,472.50	**2.6095**	**Y**	0.0463	N
Louisiana Generating LLC - Big Cajun II Power Plant	260.77	186.80	208.84	FALSE	4,010.57	13,907.83	**2.0198**	**Y**	0.0358	N
Tokai Carbon CB Ltd - Addis Facility	247.21	191.70	219.85	FALSE	306.73	7,074.42	**0.9071**	**Y**	0.0168	N
Cabot Corp - Ville Platte Plant	264.56	270.18	289.50	FALSE	936.74	11,028.20	**0.8934**	**Y**	0.0177	N
							Total Annual Contribution =		0.0395	**ug/m^3**

6- 11 - Example Day of NAAQS Hourly Background File

Hourly Background File					Source==>>		Rain CII Carbon LLC - Gramercy Coke Plant	International Paper - Bogalusa Mill	Tokai Carbon CB Ltd - Addis Facility	Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	Louisiana Generating LLC - Big Cajun II Power Plant	Cabot Corp - Ville Platte Plant	HUNT SOUTHLAND REFINING COMPANY	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	HOOD INDUSTRIES INC, WIGGINS	Hardy
					Estimated Impacts==>>		1.905	1.241	1.521	4.335	3.227	1.267	0.003	0.394	0.073	0.054
					Azmith==>>		228.267	237.231	247.209	255.069	260.769	264.564	326.455	10.027	124.355	
Year	Month	Day	Hour	Background	Wind Directio	Monitor Design Value	Source Contribution (ug/m^3)									
17	1	1	1	20.056	169	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	2	20.056	170	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	3	20.056	145	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	4	20.056	153	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	5	20.056	154	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	6	20.056	151	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	7	20.056	177	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	8	20.056	326	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	9	20.056	161	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	10	21.962	217	20	1.905	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	11	20.056	208	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	12	20.056	211	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	13	20.056	206	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	14	23.203	232	20	1.905	1.241	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	15	20.056	203	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	16	20.056	159	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	17	20.056	154	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	18	20.056	154	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	19	20.056	151	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	20	20.056	145	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	21	20.130	133	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.073	0.054
17	1	1	22	20.130	133	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.073	0.054
17	1	1	23	20.056	140	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054
17	1	1	24	20.056	147	20	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.054

Table 6-12 - Increment Affecting Emission Changes for $PM_{2.5}$ Direct				
Model ID	**Description**	**Increment Emissions (lb/hr)**	**Baseline Emissions (lb/hr)**	**Emissions Change (lb/hr)**
R6_9999	RAIN CII CARBON LLC FUGITIVES	0.47	0.11	0.36
21_1	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-001	0.00	5.08	-5.08
21_2	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-002	0.00	5.04	-5.04
21_8	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-012	36.30	0.00	36.30
21_9	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-013	36.30	0.00	36.30
05_3	LEAF RIVER CELLULOSE, LLC AA-012	11.22	8.66	2.56
05_9999	LEAF RIVER CELLULOSE, LLC FUGITIVES	4.04	3.64	0.40
05_1	LEAF RIVER CELLULOSE, LLC AA-005	0.17	0.01	0.16
05_6	LEAF RIVER CELLULOSE, LLC AA-016	2.64	0.00	2.64
05_5	LEAF RIVER CELLULOSE, LLC AA-015	6.15	2.88	3.27
PB11	IP-Power Boiler No. 11	0.00	1.82	-1.82

Table 6-13 - Precursor Emission Changes (TPY) after Baseline Dates

Site Name	Major Source Baseline Actuals 2009/2010		Baseline Inventory 2017/2018		Actual Changes Prior to Baseline		Permitted Changes Prior to Baseline		Baseline Inventory Adjustment		Adjusted Baseline Inventory	
	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2
Alabama Power Company	8433.15	27842.5	2,558.77	4,739.13	-5,874.38	-23,103.38	45.292	2.572			2,558.77	4,739.13
Rain CII Carbon LLC - Gramercy Coke Plant	355.405	3879.615	317.23	4,323.91	-38.18	444.30	3.87	2.14		-2.14	317.23	4,321.77
Tokai Carbon CB Ltd - Addis Facility	252.62	5,680.80	325.50	6,968.41	72.89	1,287.61	17.04	35.95	-17.04	-35.95	308.46	6,932.46
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	383.41	4,832.75	717.42	14,793.34	334.01	9,960.60	1.48	0.22	-1.48	-0.22	715.94	14,793.12
Cabot Corp - Ville Platte Plant	752.95	8,166.43	967.60	11,049.76	214.65	2,883.33	12.40	-0.27	-12.4		955.20	11,049.76
Louisiana Generating LLC - Big Cajun II Power Plant	11,839.13	36,646.29	3,687.10	13,551.98	-8,152.03	-23,094.31	-9,114.65	-79,427.99	8,152.03	23,094.31	11,839.13	36,646.29
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	5,719.68	6,636.10	233.96	20.44	-5,485.72	-6,615.66	-16,403.00	-28,119.00	5,485.72	6,615.66	5,719.68	6,636.10
International Paper - Bogalusa Mill	1,307.98	2,831.14	1,268.90	691.84	-39.08	-2,139.30	885.79	-1,617.84		1,617.84	1,268.90	2,309.68
Leaf River Cellulose LLC	1348.895	62.315	1,332.56	68.90	-16.34	6.58	255.16	5.16		-5.16	1,332.56	63.74

Site Name	Baseline Inventory 2017/2018		Current Actuals 2020/2021		Actual Changes after Baseline		Permitted Changes After Baseline		Increment Inventory		Adjusted Increment Inventory	
	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2	NOx	SO2
Alabama Power Company	2,558.77	4,739.13	2022.13	2583.84	-536.65	-2,155.29	-5,918.00	-1,154.90			2,558.77	4,739.13
Rain CII Carbon LLC - Gramercy Coke Plant	317.23	4,323.91	373.221	4581.705	55.99	257.79	-	-			317.23	4,323.91
Tokai Carbon CB Ltd - Addis Facility	325.50	6,968.41	315.08	7,386.85	-10.43	418.45	861.80	39.01	861.8	39.01	1,187.30	7,007.42
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	717.42	14,793.34	659.18	12,297.29	-58.24	-2,496.06	-0.21	-			717.42	14,793.34
Cabot Corp - Ville Platte Plant	967.60	11,049.76	891.09	7,994.36	-76.51	-3,055.40	-1,370.04	-23,437.25			967.60	11,049.76
Louisiana Generating LLC - Big Cajun II Power Plant	3,687.10	13,551.98	1,312.15	4,469.29	-2,374.95	-9,082.69	-	-			3,687.10	13,551.98
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	233.96	20.44			-233.96	-20.44	661.00	102.00	661.00	102.00	661.00	102.90
International Paper - Bogalusa Mill	1,268.90	691.84	1,238.27	465.18	-30.63	-226.66	164.30	91.50	164.3	91.50	1,433.20	783.34
Leaf River Cellulose LLC	1,332.56	68.90			-1,332.56	-68.90	-	-			1,332.56	68.90

Table 6-14 - Secondary Emission Impacts for Baseline and Increment Inventory

Source Information			Annual Emissions		Min of Surrounding MERPs		Min of Smith County Site	
site name	Azimuth	Project Distance (km)	NOX (TPY)	SO2 (TPY)	Annual Impact (ug/m3)	24-hr Impact (ug/m3)	Annual Impact (ug/m3)	24-hr Impact (ug/m3)
Baseline Inventory								
Tennessee Gas Pipeline Company LLC, Purvis Compressor Station Number 534	63.8	14.8	0.67	0.01	0.0000	0.0000	0.0000	0.0000
Florida Gas Transmission Company, Carnes Compressor Station	138.6	15.8	40.18	0.08	0.0001	0.0026	0.0001	0.0026
RAIN CII CARBON LLC	14.3	19.5	76.86	377.56	0.0029	0.0907	0.0030	0.1521
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	10.0	23.4	5,719.68	6,636.10	0.0473	1.7545	0.1218	3.0769
KOHLER COMPANY, HATTIESBURG ENGINE PLANT	29.0	32.6	1.69	0.15713192	0.0000	0.0001	0.0000	0.0002
HOOD INDUSTRIES INC, WIGGINS	124.4	36.1	112.07	4.99	0.0002	0.0053	0.0005	0.0123
Transamerican Waste Central Landfill Inc, Central Landfill Facility	204.2	36.6	0.18	9.8	0.0001	0.0023	0.0001	0.0038
ZEON CHEMICALS L P	17.5	38.5	8.89	1.02	0.0000	0.0006	0.0000	0.0012
Florida Gas Transmission Company, Wiggins Compressor Station, Number 10	99.9	39.3	1,039.07	6.61	0.0013	0.0395	0.0041	0.0984
Hood Industries Inc - Bogalusa Sawmill	243.8	44.0	2.4	73.03	0.0004	0.0218	0.0008	0.0232
GULF SOUTH PIPELINE COMPANY LLC, PETAL C	22.1	44.4	30.33	1.08	0.0000	0.0012	0.0001	0.0031
Leaf River Cellulose LLC	54.9	45.4	1,332.56	63.74	0.0019	0.0568	0.0053	0.1429
International Paper - Bogalusa Mill	237.2	47.8	1,268.90	2,309.68	0.0133	0.7221	0.0306	0.8450
International Paper - Bogalusa Box Plant	236.8	47.9	1.44	8.48	0.0000	0.0026	0.0001	0.0028
Alabama Power Company	89.9	135.5	2,558.77	4,739.13	0.0135	0.6742	0.0202	1.0730
Rain CII Carbon LLC - Gramercy Coke Plant	228.3	158.8	317.23	4,321.77	0.0087	0.4814	0.0124	0.6574
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	255.1	178.6	715.94	14,793.12	0.0268	1.5557	0.0368	1.9911
Louisiana Generating LLC - Big Cajun II Power Plant	260.8	186.8	11,839.13	36,646.29	0.0587	3.5952	0.0813	4.5264
Tokai Carbon CB Ltd - Addis Facility	247.2	191.7	308.46	6,932.46	0.0100	0.6243	0.0141	0.7572
Cabot Corp - Ville Platte Plant	264.6	270.2	955.20	11,049.76	0.0092	0.5628	0.0156	0.7144
Increment Inventory								
Tennessee Gas Pipeline Company LLC, Purvis Compressor Station Number 534	63.84	14.77	0.67	0.01	0.0000	0.0000	0.0000	0.0000
Florida Gas Transmission Company, Carnes Compressor Station	138.59	15.78	40.18	0.08	0.0001	0.0026	0.0001	0.0026
RAIN CII CARBON LLC	14.28	19.52	76.86	377.56	0.0029	0.0907	0.0030	0.1521
COOPERATIVE ENERGY, A MISSISSIPPI ELECTR	10.03	23.44	661.00	102.90	0.0014	0.0481	0.0041	0.1005
KOHLER COMPANY, HATTIESBURG ENGINE PLANT	28.96	32.61	1.69	0.15713192	0.0000	0.0001	0.0000	0.0002
HOOD INDUSTRIES INC, WIGGINS	124.35	36.10	112.07	4.99	0.0002	0.0053	0.0005	0.0123
Transamerican Waste Central Landfill Inc, Central Landfill Facility	204.21	36.59	0.18	9.8	0.0001	0.0023	0.0001	0.0038
ZEON CHEMICALS L P	17.52	38.47	8.89	1.02	0.0000	0.0006	0.0000	0.0012
Florida Gas Transmission Company, Wiggins Compressor Station, Number 10	99.94	39.33	1,039.07	6.61	0.0013	0.0395	0.0041	0.0984
Hood Industries Inc - Bogalusa Sawmill	243.78	44.00	2.4	73.03	0.0004	0.0218	0.0008	0.0232
GULF SOUTH PIPELINE COMPANY LLC, PETAL C	22.14	44.36	30.33	1.08	0.0000	0.0012	0.0001	0.0031
Leaf River Cellulose LLC	54.93	45.44	1,332.56	68.90	0.0019	0.0583	0.0053	0.1445
International Paper - Bogalusa Mill	237.23	47.80	1,433.20	783.34	0.0057	0.2734	0.0138	0.3790
International Paper - Bogalusa Box Plant	236.83	47.94	1.44	8.48	0.0000	0.0026	0.0001	0.0028
Alabama Power Company	89.91	135.51	2,558.77	4,739.13	0.0135	0.6742	0.0202	1.0730
Rain CII Carbon LLC - Gramercy Coke Plant	228.27	158.84	317.23	4,323.91	0.0087	0.4817	0.0124	0.6577
Oxbow Calcining LLC - Baton Rouge Calcined Coke Plant	255.07	178.60	717.42	14,793.34	0.0268	1.5558	0.0368	1.9912
Louisiana Generating LLC - Big Cajun II Power Plant	260.77	186.80	3,687.10	13,551.98	0.0213	1.3095	0.0296	1.6384
Tokai Carbon CB Ltd - Addis Facility	247.21	191.70	1,187.30	7,007.42	0.0106	0.6563	0.0148	0.8103
Cabot Corp - Ville Platte Plant	264.56	270.18	967.60	11,049.76	0.0092	0.5630	0.0156	0.7148
				Annual Emissions Change =	-0.0903	**ug/m3**	-0.1853	**ug/m3**

Table 6-15 - Hardy Technologies Point Sources

Model ID	Description	Base Elevation (m)	Height (m)	Dimeter (m)	Exit Velocity (m/s)	Exit Temperature °K	Release Orientation	Emission Rate (g/s)			
								$PM_{2.5}$		PM_{10}	
								24-hr	Annual	24-hr	Annual
AA203N	CDK#3 North Stack	85.5	16.764	0.711	26.13621	338.706	VERTICAL	0.074219	0.071197	0.077967	0.077967
KILN4N	CDK#4 North Stack	85.5	16.764	0.711	26.13621	338.706	VERTICAL	0.074219	0.071197	0.077967	0.077967
AA203S	CDK#3 South Stack	85.5	16.764	0.711	26.13621	338.706	VERTICAL	0.074219	0.071197	0.077967	0.077967
KILN4S	CDK#4 South Stack	85.5	16.764	0.711	26.13621	338.706	VERTICAL	0.074219	0.071197	0.077967	0.077967
SILOCYC	Silo Fuel Cyclone	85.5	26.615	0.61	22.15307	0	HORIZONTAL	0.026824	0.012248	0.085348	0.085348
CYC2	CDK3 Fuel Cyclone	85.5	9.296	0.61	11.07654	0	VERTICAL	0.0063866	0.0061241	0.020321	0.020321
AA204	Cyclofilter	85.5	15.24	1.524	19.07558	0	VERTICAL	0.030995	0.00021839	0.00071742	0.00071742
AA201N	North Stack CDK#1	85.5	11.227	0.813	20.01053	338.706	VERTICAL	0.036117	0.032221	0.036117	0.036117
AA202N	CDK#2 North Stack	85.5	11.227	0.813	20.01053	338.706	VERTICAL	0.036117	0.032221	0.036117	0.036117
AA201S	South Stack CDK#1	85.5	11.227	0.813	20.01053	338.706	VERTICAL	0.036117	0.032221	0.036117	0.036117
AA202S	CDK#2 South Stack	85.5	11.227	0.813	20.01053	338.706	VERTICAL	0.036117	0.032221	0.036117	0.036117

Table 6-16 - Hardy Technologies Volume Sources

Model ID	Description	Elevation (m)	Height (m)	Sigma Y (m)	Sigma Z (m)	Emission Rate (g/s)			
						$PM_{2.5}$		PM_{10}	
						24-hr	Annual	24-hr	Annual
SLINE1	Finished Lumber & Planer Shavings	85.50	3.40	8.37	3.16	0.000717	0.000718	0.00292	0.00292
SLINE2	Logs, Bark, Chips & Sawdust	85.5	3.4	8.37	3.16	0.004469	0.004473	0.01821	0.01821
AA207	Planer Shavings Truck Bin	85.5	6.096	1.202	5.671	0.00034	0.000103	0.00236	0.002363
104_206	Green Chipper/Chip Screens	85.5	6.401	2.549	5.954	0.001247	0.000874	0.00876	0.008765
AA102	Bark Hog	85.5	6.401	1.409	2.977	0.000699	0.000115	0.0049	0.004895
AA103	Merchandiser	85.5	6.401	3.788	5.954	0	0	0	0

Table 6-17 - Worst Case MERPs from Surrounding Hypothetical Sources

State	County	Metric	Precursor	Hardy Emissions (TPY)	Hypothetical Emissions TPY	Stack	MERP	MaxConc	Hardy Impact (ug/m^3)
Mississippi	Smith	8-hr Ozone	NOx	25.4	500	10	190	2.629176	0.52
Arkansas	Pulaski	8-hr Ozone	VOC	886.0	3000	90	2307	1.30062	
Florida	Bay Co	Annual PM2.5	NOx	25.4	1000	10	6618	0.030221	0.0017
Florida	Bay Co	Annual PM2.5	SO2	8.5	1000	10	1750	0.114279	
Louisiana	Orleans	Daily PM2.5	NOx	25.4	1000	10	1881	0.638064	0.0535
Louisiana	Acadia	Daily PM2.5	SO2	8.5	1000	10	274	4.373063	

MERPs from Smith County Hypothetical Sources

State	County	Metric	Precursor	Hardy Emissions (TPY)	Hypothetical Emissions TPY	Stack	MERP	MaxConc	Hardy Impact (ug/m^3)
Mississippi	Smith	8-hr Ozone	NOx	25.4	500	10	190	2.629176	0.22
Mississippi	Smith	8-hr Ozone	VOC	886.0	1000	10	10046	0.0995379	
Mississippi	Smith	Annual PM2.5	NOx	25.4	500	10	9444	0.010589	0.0011
Mississippi	Smith	Annual PM2.5	SO2	8.5	500	10	2873	0.0348113	
Mississippi	Smith	Daily PM2.5	NOx	25.4	500	10	2596	0.2311544	0.0421
Mississippi	Smith	Daily PM2.5	SO2	8.5	500	10	337	1.7815764	

Worst Case MERPs from Surrounding Hypothetical Sources Hunt Oil

State	County	Metric	Precursor	Hunt Oil Emissions (TPY)	Hypothetical Emissions TPY	Stack	MERP	MaxConc	Hunt Oil Impact (ug/m^3)
Florida	Bay Co	Annual PM2.5	NOx	4.0	1000	10	6618	0.030221	0.0001
Florida	Bay Co	Annual PM2.5	SO2	0.1	1000	10	1750	0.114279	
Louisiana	Orleans	Daily PM2.5	NOx	4.0	1000	10	1881	0.638064	0.0028
Louisiana	Acadia	Daily PM2.5	SO2	0.1	1000	10	274	4.373063	

MERPs from Smith County Hypothetical Sources Hunt Southland Oil

State	County	Metric	Precursor	Hunt Oil Emissions (TPY)	Hypothetical Emissions TPY	Stack	MERP	MaxConc	Hunt Oil Impact (ug/m^3)
Mississippi	Smith	Annual PM2.5	NOx	4.0	500	10	9444	0.010589	0.0001
Mississippi	Smith	Annual PM2.5	SO2	0.1	500	10	2873	0.0348113	
Mississippi	Smith	Daily PM2.5	NOx	4.0	500	10	2596	0.2311544	0.0020
Mississippi	Smith	Daily PM2.5	SO2	0.1	500	10	337	1.7815764	

Table 6-18 - Modeling Results

Pollutant, Time Period and Standard	Modeled Facility Concentration ($\mu g/m^3$)	Modeled Concentration with Surrounding Sources ($\mu g/m^3$)	Secondary PM ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Cumulative Concentration ($\mu g/m^3$)	Value of Standard ($\mu g/m^3$)	Percent of Standard	Location			ROI (km)[1]
								UTM E (m)	UTM N (m)	Elevation (ft)	
Significant Impact Analysis											
$PM_{2.5}$ 24-hr SIL	12.96422	N/A	0.054	N/A	13.01772	1.2	1084.8%	267276.54	3433612.1	83.99	2.7
$PM_{2.5}$ 24-hr Class I SIL @ 46-50km	0.06565	N/A	0.054	N/A	0.11915	0.27	44.1%	251743.31	3476517.2	124.1	
$PM_{2.5}$ Annual SIL	2.40113	N/A	0.0017	N/A	2.40283	0.2	1201.4%	267275.59	3433562.2	85.49	1.9
$PM_{2.5}$ Annual Class I SIL@ 46-50km	0.00521	N/A	0.0017	N/A	0.00691	0.05	13.8%	259488.42	3478592.5	90.5	
PM_{10} 24-hr SIL	16.39931	N/A	N/A	N/A	16.39931	5	328.0%	267276.54	3433612.1	83.99	1.0
PM_{10} 24-hr Class I SIL@ 46-50km	0.08736	N/A	N/A	N/A	0.08736	0.3	29.1%	251743.31	3476517.2	124.1	
PM_{10} Annual SIL	3.32849	N/A	N/A	N/A	3.32849	1	332.8%	267275.59	3433562.2	85.49	0.8
PM_{10} Annual Class I SIL@ 46-50km	0.00566	N/A	N/A	N/A	0.00566	0.2	2.8%	259488.42	3478592.5	90.5	
Cumulative Impact Analysis											
$PM_{2.5}$ 24-hr NAAQS	9.10164	9.18223	0.08	20	29.26434	35	83.6%	267275.59	3433562.2	85.49	
$PM_{2.5}$ Annual NAAQS	0.09771	2.38213	0.11416	9.43	11.92358487	12	99.4%	266200	3435200	84.97	
PM_{10} 24-hr NAAQS		16.14084	N/A	64	80.14084	150	53.4%	267275.59	3433562.2	85.49	
PM_{10} 24-hr PSD Increment		16.14084	N/A	N/A	16.14084	30	53.8%	267275.59	3433562.2	85.49	
PM_{10} Annual PSD Increment	3.65278	3.73812	N/A	N/A	3.73812	17	22.0%	267275.59	3433562.2	85.49	
$PM_{2.5}$ 24-hr PSD Increment											
Secondary Formation Estimate Method	**Year**	**Baseline H1H Concentration (µg/m3)**	**Baseline + Changes H2H (µg/m3)**	**Secondary PM (µg/m3)**	**Increment Impact (µg/m3)**	**Value of Standard (µg/m3)**	**Percent of Standard**	**UTM E (m)**	**UTM N (m)**	**Elevation (ft)**	
Illustrative MERPs with Distance Minimum Dispersion of Surrounding Sites	2017	3.94464	9.90579	Secondary Impacts Included in Hourly Background File	5.96	9	66.2%	267275.59	3433562.2	85.49	
	2018	***3.12013***	***12.75963***		***9.64***	***9***	***107.1%***	***267275.6***	***3433562.2***	***85.49***	
	2019	3.35362	11.57188		8.22	9	91.3%	267276.54	3433612.1	83.99	
	2020	4.19066	10.26803		6.08	9	67.5%	267272.72	3433412.6	90.63	
	2021	4.03964	11.0297		6.99	9	77.7%	267276.54	3433612.1	83.99	
Illustrative MERPs with Distance Minimum Dispersion of Smith County	2017	4.952	9.92609		4.97	9	55.3%	267276.54	3433612.1	83.99	
	2018	***3.9198***	***12.78617***		***8.87***	***9***	***98.5%***	***267275.6***	***3433562.2***	***85.49***	
	2019	4.21725	11.57311		7.36	9	81.7%	267276.54	3433612.1	83.99	
	2020	5.23848	10.56118		5.32	9	59.1%	267272.72	3433412.6	90.63	
	2021	5.06576	11.03009		5.96	9	66.3%	267276.54	3433612.1	83.99	
$PM_{2.5}$ Annual PSD Increment											
Illustrative MERPs with Distance Minimum Dispersion of Surrounding MERPs Sites	2017	0.07322	2.10516	-0.090264946	1.94	4	48.5%	267275.6	3433562	85.49	
	2018	0.0744	2.16389	-0.090264946	2.00	4	50.0%	267275.6	3433562	85.49	
	2019	***0.07***	***2.33471***	***-0.090264946***	***2.17***	***4***	***54.4%***	***267276.5***	***3433612***	***83.99***	
	2020	0.07227	2.05758	-0.090264946	1.90	4	47.4%	267275.6	3433562	85.49	
	2021	0.07198	2.09355	-0.090264946	1.93	4	48.3%	267250	3433600	85.38	

Table 6-19 - $PM_{2.5}$ NAAQS Point Source Emission Sources

Model ID	Description	Emissions (lb/hr)	Base Elevation (m)	Height (m)	Diameter (m)	Exit Velocity (m)	Temp K
11_7	HUNT SOUTHLAND REFINING COMPANY 16MMBTUH NG ASPHALTHEATER	0.120000529	86.77	18.288	1.219	0.4572	436.111
11_13	HUNT SOUTHLAND REFINING COMPANY 26MMBTUH NG BOILER	0.190000838	85.25	4.267	0.61	4.572	430
11_14	HUNT SOUTHLAND REFINING COMPANY 24.6MMBTUH NG BOILER	0.180000794	84.88	9.144	0.853	0.73152	408.333
77D	IP - Bogalusa Mill Outfall Emergency Backup Generator	0.004000018	24.15	4.877	0.061	36.05784	561.111
77A	IP - Bogalusa Mill Influent Plant Backup Generator	0.950004189	25.11	2.286	0.213	17.3736	422.222
05	IP - Bogalusa Mill Lime Kiln	25.46011226	30.91	51.819	2.134	8.64108	350
77F	IP - Bogalusa Mill Lime Kiln Auxiliary Drive	0.180000794	30.73	2.286	0.213	17.3736	422.222
43E	IP - Bogalusa Mill New Lime Slaker	3.010013272	30.63	57.302	0.61	1.16434	372.222
77E	IP - Bogalusa Mill Admin Building Emergency Generator	1.250005511	29.94	2.286	0.213	17.3736	422.222
25B	IP - Bogalusa Mill BLO Secondary Tank	0.370001632	32.2	9.754	0.826	8.29056	311.111
04	IP - Bogalusa Mill Smelt Dissolving Tank No. 20	13.83006098	32.07	42.98	1.829	6.49224	336.111
21	IP - Bogalusa Mill Hogged Fuel Boiler No. 12	82.41036337	30.68	45.72	3.658	11.75918	341.111
06	IP - Bogalusa Mill Hogged Fuel Boiler No. 10C	62.26027452	30.91	41.148	3.048	11.32332	340.833
23	IP - Bogalusa Mill Smelt Dissolving Tank No. 21	16.30007187	32.24	65.532	1.676	8.90016	350
20	IP - Bogalusa Mill Recovery Furnace No. 20	45.52020071	32.76	76.2	3.048	17.43761	432.222
22	IP - Bogalusa Mill Recovery Furnace No. 21	46.46020485	32.24	76.2	3.353	19.33346	416.667
77C	IP - Bogalusa Mill Fire Pump Auxiliary Drive	0.290001279	31.33	4.877	0.213	7.58952	422.222
73B	IP - Bogalusa Mill New Log Debarker	0.006000027	31.59	11.582	0.305	0.001	295.556
72B	IP - Bogalusa Mill Ash Storage and Handling	0.010000044	31.05	3.048	0.305	0.001	255.556
23_2	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-002	0.430001896	82.52	9.144	0.61	17.3736	700
23_3	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-003	0.430001896	82.52	9.144	0.61	17.3736	700
23_4	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-004	0.430001896	82.52	9.144	0.61	17.3736	700
23_5	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-005	0.430001896	82.52	9.144	0.61	17.3736	700
23_6	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-006	0.430001896	82.52	9.144	0.61	17.3736	700
23_7	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-007	6.870030291	82.52	9.449	1.524	11.5824	700
23_8	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-008	6.870030291	82.52	9.449	1.524	11.5824	700
23_9	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-009	0	82.52	4.572	0.61	3.048	644.444
23_9999	TENNESSEE GAS PIPELINE COMPANY LLC, PURV FUGITIVES	0	82.52	3.048	0.305	0.0003	255.556
21_4	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-005	1.100004851	79.55	2.438	0.076	4.572	394.444
21_5	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-006	0	79.55	17.983	8.534	4.572	295.556
21_6	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-007	0	79.55	17.983	8.534	4.572	295.556
21_7	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-011	0.390001719	79.55	4.572	0.204	48.06696	788.333
21_8	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-012	36.30016006	79.55	60.96	7.544	16.21536	353.889
21_9	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-013	36.30016006	79.55	60.96	7.544	16.21536	353.889
21_10	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-014	1.670007364	79.55	30.48	0.914	42.9768	505.556
21_11	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-015	0.070000308	79.55	4.877	0.61	2.4384	450
21_12	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-016	0.070000308	79.55	4.877	0.61	2.4384	450
21_13	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-017	0.010000044	79.55	3.048	0.61	19.41576	677.778
21_14	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-020	0	79.55	4.877	0.61	2.4384	450
21_9999	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR FUGITIVES	0	79.55	3.048	0.305	0.0003	255.556
03_1	HOOD INDUSTRIES INC, WIGGINS AA-001	20.83009184	73.75	15.24	1.219	17.70888	515.556
03_2	HOOD INDUSTRIES INC, WIGGINS AA-002	20.83009184	73.75	15.24	1.219	16.36776	510.556
03_3	HOOD INDUSTRIES INC, WIGGINS AA-003	22.91010102	73.75	15.24	1.402	15.51432	468.889
03_4	HOOD INDUSTRIES INC, WIGGINS AA-004	0	73.75	19.812	0.61	12.4968	436.111
03_5	HOOD INDUSTRIES INC, WIGGINS AA-005	3.310014594	73.75	16.154	1.676	9.4488	292.778
03_6	HOOD INDUSTRIES INC, WIGGINS AA-006	0.530002337	73.75	13.716	0.305	8.5344	292.778
03_7	HOOD INDUSTRIES INC, WIGGINS AA-007	0	73.75	19.812	0.61	6.096	422.222
03_8	HOOD INDUSTRIES INC, WIGGINS AA-008	0.390001719	73.75	12.192	3.048	4.572	292.778

Table 6-19 - $PM_{2.5}$ NAAQS Point Source Emission Sources

Model ID	Description	Emissions (lb/hr)	Base Elevation (m)	Height (m)	Diameter (m)	Exit Velocity (m)	Temp K
03_9	HOOD INDUSTRIES INC, WIGGINS AA-009	0.390001719	73.75	16.764	2.134	4.572	292.778
03_10	HOOD INDUSTRIES INC, WIGGINS AA-010	0.390001719	73.75	16.764	1.615	4.572	292.778
03_11	HOOD INDUSTRIES INC, WIGGINS AA-011	0.120000529	73.75	8.534	5.578	4.572	292.778
03_12	HOOD INDUSTRIES INC, WIGGINS AA-012	0.100000441	73.75	8.534	3.658	4.572	292.778
03_13	HOOD INDUSTRIES INC, WIGGINS AA-013	0	73.75	17.983	1.097	4.572	292.778
03_14	HOOD INDUSTRIES INC, WIGGINS AA-014	0	73.75	17.069	0.792	4.572	292.778
03_15	HOOD INDUSTRIES INC, WIGGINS AA-015	0	73.75	11.278	0.274	4.572	292.778
03_16	HOOD INDUSTRIES INC, WIGGINS AA-016	0	73.75	11.887	0.305	4.572	292.778
03_25	HOOD INDUSTRIES INC, WIGGINS AA-025	0.870003836	73.75	12.192	1.003	18.1356	465.556
03_26	HOOD INDUSTRIES INC, WIGGINS AA-026	0	73.75	13.716	0.914	7.9248	311.111
03_27	HOOD INDUSTRIES INC, WIGGINS AA-017	9.860043475	73.75	19.812	0.61	4.572	325
03_9999	HOOD INDUSTRIES INC, WIGGINS FUGITIVES	2.000008819	73.75	3.048	0.305	0.0003	255.556
AA203N	Hardy CDK#3 North Stack	0.589053078	85.5	16.764	0.7112	26.13620524	338.7055556
KILN4N	Hardy CDK#4 North Stack	0.589053078	85.5	16.764	0.7112	26.13620524	338.7055556
AA203S	Hardy CDK#3 South Stack	0.589053078	85.5	16.764	0.7112	26.13620524	338.7055556
KILN4S	Hardy CDK#4 South Stack	0.589053078	85.5	16.764	0.7112	26.13620524	338.7055556
SILOCYC	Hardy Silo Fuel Cyclone	0.212890712	85.5	26.615136	0.6096	22.15307396	0
CYC2	Hardy CDK3 Fuel Cyclone	0.050688265	85.5	9.2964	0.6096	11.07653698	0
AA204	Hardy Cyclofilter	0.005693913	85.5	15.24	1.524	19.07558	0
AA201N	Hardy North Stack CDK#1	0.286648558	85.5	11.2268	0.8128	20.01053214	338.7055556
AA202N	Hardy CDK#2 North Stack	0.286648558	85.5	11.2268	0.8128	20.01053214	338.7055556
AA201S	Hardy South Stack CDK#1	0.286648558	85.5	11.2268	0.8128	20.01053214	338.7055556
AA202S	Hardy CDK#2 South Stack	0.286648558	85.5	11.2268	0.8128	20.01053214	338.7055556

Table 6-20 - $PM_{2.5}$ NAAQS Volume Source Emission Sources

Model ID	Description	Emissions (lb/hr)	Base Elevation (m)	Height (m)	SigmaY	SigmaZ
11_9999	HUNT SOUTHLAND REFINING COMPANY Fugitives	0.090000397	86.98	3.048	2.326	3.544
26D	IP - Bogalusa Mill Paper Machine No. 7	8.740038537	28.78	15.88	10.065	7.386
26E	IP - Bogalusa Mill Paper Machine No. 8	9.990044049	28.78	23.47	10.065	10.916
61A	IP - Bogalusa Mill Sawdust Cyclone	0.66000291	35.99	4.572	66.276	2.127
61C	IP - Bogalusa Mill Bark Pile Fugitives	0.011000049	35.99	4.572	66.276	2.127
61D	IP - Bogalusa Mill Chip Pile Fugitives	0.020000089	35.99	4.572	66.276	2.127
62	IP - Bogalusa Mill Paved and Unpaved Road Fugitives	1.780007848	35.99	4.572	66.276	2.127
72A	IP - Bogalusa Mill Lime Storage and Handling	0.020000089	31.05	4.572	66.276	2.127
AA207	Planer Shavings Truck Bin	0.002700014	85.5	6.096	1.20	5.67
104_206	Green Chipper/Chip Screens	0.009900052	85.5	6.4008	2.55	5.95
AA102	Bark Hog	0.005550029	85.5	6.4008	1.41	2.98
SLINE1	Hardy Finished Lumber & Planer Shavings Road	0.00569003	85.5	3.4	8.37	3.16
SLINE2	Hardy Logs, Bark, Chips & Sawdust Road	0.035470185	85.5	3.4	8.37	3.16

Table 6-21 - Increment Analysis Inventory

Model ID	Description	Elevation (m)	Stack Height (m)	Stack Diameter (m)	Stack Velocity (m/s)	Stack Temp. (^{o}K)	Increment Emissions (lb/hr)
08_1	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-001	77.16	8.2296	0.405384	22.86	644.4444444	0.09
08_2	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-002	77.16	8.2296	0.405384	22.86	644.4444444	0.09
08_3	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-003	77.16	8.2296	0.405384	22.86	644.4444444	0.11
08_4	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-004	77.16	8.2296	0.405384	22.86	644.4444444	0.11
08_5	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-005	77.16	8.2296	0.405384	22.86	644.4444444	0.09
08_7	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-012	77.16	16.764	0.4572	41.26992	641.6666667	0.14
08_8	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-013	77.16	19.812	1.2192	11.21664	541.6666667	1.09
08_9	FLORIDA GAS TRANSMISSION COMPANY, WIGGIN AA-014	77.16	19.812	1.2192	11.21664	541.6666667	1.03
R6_1	RAIN CII CARBON LLC AA-001	94.22	34.7472	2.642616	5.15112	480.5555556	6.60
R6_9999	RAIN CII CARBON LLC FUGITIVES	94.22	3.048	0.3048	0.0003048	0	0.47
11_7	HUNT SOUTHLAND REFINING COMPANY AA-007	81.77	18.288	1.2192	0.4572	436.1111111	0.01
11_13	HUNT SOUTHLAND REFINING COMPANY AA-013	81.77	4.2672	0.6096	4.572	430	0.01
11_9999	HUNT SOUTHLAND REFINING COMPANY FUGITIVES	81.77	3.048	0.3048	0.0003048	0	0.00
11_14	HUNT SOUTHLAND REFINING COMPANY AA-020	81.77	9.144	0.85344	0.73152	408.3333333	0.03
21_1	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-001	79.55	124.3584	5.007864	18.8976	366.6666667	0.00
21_2	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-002	79.55	124.3584	5.1054	18.8976	366.6666667	0.00
21_3	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-004	79.55	3.6576	0.1524	4.572	394.4444444	0.55
21_4	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-005	79.55	2.4384	0.0762	4.572	394.4444444	1.10
21_9999	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR FUGITIVES	79.55	3.048	0.3048	0.0003048	0	1.00
21_7	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-011	79.55	4.572	0.204216	48.06696	788.3333333	0.00
21_8	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-012	79.55	60.96	7.5438	16.21536	353.8888889	36.30
21_9	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-013	79.55	60.96	7.5438	16.21536	353.8888889	36.30
21_10	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-014	79.55	30.48	0.9144	42.9768	505.5555556	1.70
21_11	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-015	79.55	4.8768	0.6096	2.4384	450	0.07
21_12	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-016	79.55	4.8768	0.6096	2.4384	450	0.07
21_13	COOPERATIVE ENERGY, A MISSISSIPPI ELECTR AA-017	79.55	3.048	0.6096	19.41576	677.7777778	0.70
05_3	LEAF RIVER CELLULOSE, LLC AA-012	35.68	91.44	1.76784	7.40664	345	11.22
05_4	LEAF RIVER CELLULOSE, LLC AA-013	35.68	51.816	1.728216	11.49096	346.1111111	6.85
05_9999	LEAF RIVER CELLULOSE, LLC FUGITIVES	35.68	3.048	0.3048	0	0	4.04
05_1	LEAF RIVER CELLULOSE, LLC AA-005	35.68	6.096	0.4572	4.572	394.4444444	0.17
05_2	LEAF RIVER CELLULOSE, LLC AA-011	35.68	91.44	4.1148	22.12848	462.2222222	24.78
05_6	LEAF RIVER CELLULOSE, LLC AA-016	35.68	24.384	0.94488	10.85088	358.3333333	2.64
05_5	LEAF RIVER CELLULOSE, LLC AA-015	35.68	91.44	2.8956	20.39112	450	6.15
03_1	HOOD INDUSTRIES INC, WIGGINS AA-001	73.75	15.24	1.2192	17.70888	515.5555556	2.97
03_2	HOOD INDUSTRIES INC, WIGGINS AA-002	73.75	15.24	1.2192	16.36776	510.5555556	16.97
03_3	HOOD INDUSTRIES INC, WIGGINS AA-003	73.75	15.24	1.40208	15.51432	468.8888889	7.89
03_5	HOOD INDUSTRIES INC, WIGGINS AA-005	73.75	16.1544	1.6764	9.4488	292.7777778	0.08
03_8	HOOD INDUSTRIES INC, WIGGINS AA-008	73.75	12.192	3.048	4.572	292.7777778	0.28
03_9	HOOD INDUSTRIES INC, WIGGINS AA-009	73.75	16.764	2.1336	4.572	292.7777778	0.28
03_10	HOOD INDUSTRIES INC, WIGGINS AA-010	73.75	16.764	1.61544	4.572	292.7777778	0.24
03_11	HOOD INDUSTRIES INC, WIGGINS AA-011	73.75	8.5344	5.57784	4.572	292.7777778	0.08
03_12	HOOD INDUSTRIES INC, WIGGINS AA-012	73.75	8.5344	3.6576	4.572	292.7777778	0.06
03_15	HOOD INDUSTRIES INC, WIGGINS AA-015	73.75	11.2776	0.27432	4.572	292.7777778	0.15
03_16	HOOD INDUSTRIES INC, WIGGINS AA-016	73.75	11.8872	0.3048	4.572	292.7777778	0.13
03_27	HOOD INDUSTRIES INC, WIGGINS AA-017	73.75	19.812	0.6096	4.572	325	6.72
03_25	HOOD INDUSTRIES INC, WIGGINS AA-025	73.75	12.192	1.002792	18.1356	465.5555556	0.21
03_9999	HOOD INDUSTRIES INC, WIGGINS FUGITIVES	73.75	3.048	0.3048	0.0003048	0	1.55
04	IP- Bogalusa Mill Smelt Dissolving Tank No. 20	32.07	42.979848	1.8288	6.49224	336.1111111	9.22
05	IP-- Bogalusa Mill Lime Kiln	30.91	51.819048	2.1336	8.64108	350	11.27
06	IP- Bogalusa Mill Hogged Fuel Boiler No. 10C	30.91	41.148	3.048	11.32332	340.8333333	11.70
20	IP- Bogalusa Mill Recovery Furnace No. 20	32.76	76.2	3.048	17.437608	432.2222222	11.96
PB11	IP-Power Boiler No. 11	32.76	15.24	1.9812	11.835384	475.0055556	0.00
21	IP- Bogalusa Mill Hogged Fuel Boiler No. 12	30.68	45.72	3.6576	11.759184	341.1111111	21.30
22	IP- Bogalusa Mill Recovery Furnace No. 21	32.24	76.2	3.3528	19.333464	416.6666667	23.49
23	IP- Bogalusa Mill Smelt Dissolving Tank No. 21	32.24	65.532	1.6764	8.90016	350	7.20
25A	IP - Bogalusa Mill Smelt Dissolving Tank No. 21	32.24	65.532	1.6764	8.90016	350	0.22
25B	IP- Bogalusa Mill BLO Secondary Tank	32.2	9.7536	0.826008	8.29056	311.1111111	0.22
26D	IP- Bogalusa Mill Paper Machine No. 7	28.78	15.88008				3.60
26E	IP- Bogalusa Mill Paper Machine No. 8	28.78	23.4696	See Table 6-20 for Volume Source Parameters			4.55
43E	IP- Bogalusa Mill New Lime Slaker	30.63	57.3024	0.6096	1.164336	372.2222222	0.03
61A	IP- Bogalusa Mill Sawdust Cyclone	35.99	4.572				0.79
61C	IP- Bogalusa Mill Bark Pile Fugitives	35.99	4.572				0.07
61D	IP- Bogalusa Mill Chip Pile Fugitives	35.99	4.572	See Table 6-20 for Volume Source Parameters			0.06
62	IP- Bogalusa Mill Paved and Unpaved Road Fugitives	35.99	4.572				1.37
72A	IP- Bogalusa Mill Lime Storage and Handling	31.05	4.572				0.01
72B	IP- Bogalusa Mill Ash Storage and Handling	31.05	0	0	0	255.5555556	0.00
73B	IP- Bogalusa Mill New Log Debarker	31.59	11.5824	0	0	295.5555556	0.08
77A	IP- Bogalusa Mill Influent Plant Backup Generator	25.11	2.286	0.21336	17.3736	422.2222222	0.00
77F	IP - Bogalusa Mill Lime Kiln Auxiliary Drive	30.73	2.286	0.21336	17.3736	422.2222222	0.00
77C	IP- Bogalusa Mill Fire Pump Auxiliary Drive	31.33	4.8768	0.21336	7.58952	422.2222222	0.00
77D	IP - Bogalusa Mill Outfall Emergency Backup Generator	24.15	4.8768	0.06096	36.05784	561.1111111	0.00
77E	IP- Bogalusa Mill Admin Building Emergency Generator	29.94	2.286	0.21336	17.3736	422.2222222	0.01
23_3	TENNESSEE GAS PIPELINE COMPANY LLC, PURV AA-003	82.52	9.144	0.6096	17.3736	700	0.00
39_9999	TRANSAMERICAN WASTE CENTRAL LANDFILL IN FUGITIVES	75.06	3.048	0.3048	0	255.5555556	0.37

Table 6-21 - Increment Analysis Inventory

Model ID	Description	Elevation (m)	Stack Height (m)	Stack Diameter (m)	Stack Velocity (m/s)	Stack Temp. (^{o}K)	Increment Emissions (lb/hr)
17_1	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-001	51.31	13.716	0.405384	11.8872	394.4444444	0.00
17_2	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-002	51.31	13.716	1.0668	9.4488	394.4444444	0.02
17_3	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-003	51.31	13.716	0.405384	10.668	394.4444444	0.03
17_5	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-005	51.31	13.716	0.405384	10.668	394.4444444	0.01
17_6	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-006	51.31	13.716	0.405384	10.0584	394.4444444	0.08
17_7	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 AA-007	51.31	13.1064	0.3048	22.64664	394.4444444	0.08
17_9999	KOHLER COMPANY HATTIESBURG ENGINE PLANT2 FUGITIVES	51.31	3.048	0.3048	0	255.5555556	0.01
04_1	FLORIDA GAS TRANSMISSION COMPANY, CARNES AA-001	76.36	3.6576	0.21336	35.6616	811.1111111	0.01
04_2	FLORIDA GAS TRANSMISSION COMPANY, CARNES AA-002	76.36	3.6576	0.21336	35.6616	811.1111111	0.01
50_1	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AA-001	61.2	4.2672	0.505968	37.4904	701.1111111	0.00
50_2	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AA-002	61.2	4.2672	0.505968	37.4904	701.1111111	0.01
50_8	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AA-008	61.2	6.096	0.3048	32.3088	650	0.00
50_9	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-001	61.2	13.1064	0.4572	30.48	625	0.05
50_10	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-002	61.2	13.1064	0.4572	30.48	625	0.03
50_11	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-003	61.2	13.1064	0.4572	30.48	625	0.04
50_12	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-004	61.2	13.1064	0.4572	30.48	625	0.04
50_13	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-005	61.2	13.1064	0.4572	30.48	625	0.05
50_14	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-006	61.2	10.9728	0.4572	2.286	766.6666667	0.00
50_15	GULF SOUTH PIPELINE COMPANY LLC, PETAL C AB-007	61.2	10.9728	0.4572	1.15824	766.6666667	0.00
50_9999	GULF SOUTH PIPELINE COMPANY LLC, PETAL C FUGITIVES	61.2	3.048	0.3048	0	255.5555556	0.02
06_1	ZEON CHEMICALS L P AA-001	55.84	30.48	0.051816	16.3068	1255.555556	0.01
06_21	ZEON CHEMICALS L P AA-003	55.84	7.3152	0.582168	21.12264	316.6666667	0.05
06_22	ZEON CHEMICALS L P AA-005	55.84	5.7912	0.6096	13.4112	311.1111111	0.01
06_23	ZEON CHEMICALS L P AA-085	55.84	5.7912	0.6096	1.95072	311.1111111	0.00
06_4	ZEON CHEMICALS L P AA-007	55.84	10.668	0.9906	5.27304	394.4444444	0.08
06_30	ZEON CHEMICALS L P AA-008	55.84	10.668	0.9906	5.27304	394.4444444	0.07
72	IP Bogalusa Box Plant	30.12	22.2504	4.4196	3.07848	300	0.16
73	IP Bogalusa Box Plant	30.12	20.7264	3.26136	2.83464	300	0.02
75	IP Bogalusa Box Plant	30.12	24.384	0.158829982	5.266944	300	0.01
77	IP Bogalusa Box Plant	30.15	12.192	0.270964497	12.685776	472.2222222	0.09
C5	Hood Industries Inc - Bogalusa Sawmill	34.28	10.668	1.8288	7.19328	294.4444444	0.00
C7	Hood Industries Inc - Bogalusa Sawmill	34.35	7.3152	0.9144	32.33928	294.4444444	0.00
F1	Hood Industries Inc - Bogalusa Sawmill	35.82	3.048	0.3048	0.0003048	294.4444444	0.01
F2	Hood Industries Inc - Bogalusa Sawmill	35.68	3.048	0.3048	0.0003048	294.4444444	0.09
F3	Hood Industries Inc - Bogalusa Sawmill	34.26	3.048	0.3048	0	294.4444444	0.03
P1	Hood Industries Inc - Bogalusa Sawmill	34.09	8.2296	0.355684323	4.608576	380.5555556	2.25
P10	Hood Industries Inc - Bogalusa Sawmill	33.83	4.572	0.1524	3.048	755.5555556	0.00
P2	Hood Industries Inc - Bogalusa Sawmill	34.14	8.2296	0.355684323	4.608576	380.5555556	2.13
K3	Hood Industries Inc - Bogalusa Sawmill	34.13	8.2296	0.355684323	4.608576	380.5555556	2.87
P4	Hood Industries Inc - Bogalusa Sawmill	34.18	8.2296	0.355684323	4.608576	380.5555556	2.40

Mississippi Consolidated Air Application
(Appendix A)

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

1. Name, Address, and Location of Facility

A. Owner/Company Name: Hardy Technologies LLC

B. Facility Name *(if different than A. above)*: Hardy Technologies LLC

C. Facility Air Permit No. *(if known)*: 1440-00046

D. Agency Interest No. *(if known)*: 78685

E. Physical Address
1. Street Address: 115 Old Highway 11
2. City: Lumberton
3. State: MS
4. County: Lamar
5. Zip Code: 39455
6. Telephone No.:
7. Fax No.:

F. Mailing Address *(if different from physical address)*
1. Street Address or P.O. Box:
2. City:
3. State:
4. Zip Code:

G. Latitude/Longitude Data
1. Collection Point *(check one)*:
☒ Plant Entrance ☐ Other:
2. Method of Collection *(check one)*:
☐ GPS Specify coordinate system (NAD 83, etc.)
☒ Map Interpolation (Google Earth, etc.) ☐ Other:
3. Latitude *(degrees/minutes/seconds)*: 31° 00’ 24.82” N
4. Longitude *(degrees/minutes/seconds)*: 89° 25’ 52.62” W
5. Elevation: 284 feet

H. SIC/NAICS Codes *(primary code listed first)*
SIC: 2421
NAICS: 321113
(NAICS Code should correspond with the SIC Code directly above.)

2. Name and Address of Facility Contact

A. Name: Chris Pease Title: Plant Manager

B. Mailing Address
1. Street Address or P.O. Box: PO Box 108
2. City: Moyie Springs
3. State: ID
4. Zip Code: 83845
5. Email: cpease@ifg.com
6. Telephone No.: 208-255-3252
7. Fax No.: 208-255-3286

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

3. Name and Address of Air Contact *(if different from Facility Contact)*

A. Name: _____ Title: _____

B. Mailing Address

1. Street Address or P.O. Box: _____
2. City: _____ 3. State: _____
4. Zip Code: _____ 5. Email: _____
6. Telephone No.: _____ 7. Fax No.: _____

4. Name and Address of the Responsible Official for the Facility

The Responsible Official is defined as one of the following:

a. For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated in accordance with corporate procedures.

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For purposes of these regulations, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA). A principal executive officer of a military facility includes the facility commander, chief executive officer, or any other similar person who performs similar policy or decision-making functions for the institution.

A. Name: Marc Brinkmeyer Title: Member

B. Mailing Address

1. Street Address or P.O. Box: PO Box 443
2. City: Athol 3. State: ID
4. Zip Code: 83801 5. Email: _____
6. Telephone No.: _____ 7. Fax No.: _____

C. Is the person above a duly authorized representative and not a corporate officer? ☐ Yes ☒ No

If yes, has written notification of such authorization been submitted to MDEQ?

☐ Yes ☐ No ☐ Request for authorization is attached

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

5. Type of Permit Application *(Check all that apply)*

State Permit to Construct (i.e., non-PSD or PSD avoidance)

☐ Initial Application ☐ Modification

New Source Review (NSR) Permit to Construct (includes both Prevention of Significant Deterioration (PSD) and Nonattainment)

☐ Initial Application ☒ Modification

Title V Operating Permit

☐ Initial Application

☐ Re-issuance: *Are any modifications to the permit/facility being requested?* ☐ Yes ☐ No

(If yes, provide a separate sheet identifying the modification(s) and resulting change to emissions.)

☐ Modification (*Specify type):* ☐ Significant ☐ Minor ☐ Administrative

Synthetic Minor Operating Permit *(Appendix B must be completed and attached.)*

☐ Initial Application

☐ Re-issuance: *Are any modifications to the permit/facility being requested? If yes, address such on a separate sheet.* ☐ Yes ☐ No

☐ Modification

State Permit to Operate a Significant Minor Source *(defined in 11 Miss. Admin. Code Pt. 2, R.2.1.C(25).)*

☐ Initial Application

☐ Re-issuance: *Are any modifications to the permit/facility being requested? If yes, address such on a separate sheet.* ☐ Yes ☐ No

☐ Modification

True Minor Determination

☐ Uncontrolled potential to emit air pollutants is below the Title V thresholds

6. Process/Product Details

A. List Significant Raw Materials *(if applicable)*:
Raw logs

B. List All Products *(if applicable)*: Finished Lumber, chips, bark, shavings, dry waste material

C. Brief Description of Principal Process(es):
Logs will be processed into finished lumber through the sawmill, kilns, and planer mill. Byproducts of the process (chips, bark, shavings, dry waste) will be collected and shipped off site.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

6. Process/Product Details (continued)

D. Maximum Throughput for Raw Material(s) *(if applicable)*:

Raw Material	Throughput	Units
Logs	1,800,000	Tons/year

E. Maximum Throughput for Principal Product(s) *(if applicable)*:

Product	Throughput	Units
Finished lumber	400	MMBF/yr

7. Facility Operating Information

A. Number of employees at the facility: 135

	Average Actual	Maximum Potential
B. Hours per day the facility will operate:		24
C. Days per week the facility will operate:		7
D. Weeks per year the facility will operate:		52
E. Months the facility will operate:		12

8. Maps

A. Attach a topographical map of the area extending to at least ½ mile beyond the property boundaries. The map must show the outline of the property boundaries.

B. Attach a site map/diagram showing the outline of the property, an outline of all buildings and roadways on the site, and the location of each significant air emission source.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

9. Zoning

A. Is the facility (either existing or proposed) located in accordance with any applicable city and/or county zoning ordinances? If no, please explain.
Yes

B. Is the facility (either existing or proposed) required to obtain any zoning variance to locate/expand the facility at this site? If yes, please explain.
No

10. Risk Management Plan

A. Is the facility required to develop and register a risk management plan pursuant to Section 112(r), regulated under 40 CFR Part 68? ☐ Yes ☒ No

B. If yes, to whom was the plan submitted? _____
Date submitted: _____

11. *Is confidential information being submitted with this application?* ☐ Yes ☒ No

If so, please follow the procedures outlined in the Mississippi Code Ann. Sections 49-17-39 and 17-17-27(6), as outlined in MCEQ-2 – "Regulation regarding the review and reproduction of public records".

12. MS Secretary of State Registration / Certificate of Good Standing

No permit will be issued to a company that is not authorized to conduct business in Mississippi. If the company applying for the permit is a corporation, limited liability company, a partnership or a business trust, the application package should include proof of registration with the Mississippi Secretary of State and/or a copy of the company's Certificate of Good Standing. The name listed on the permit will include the company name as it is registered with the Mississippi Secretary of State.

It should be noted that for an application submitted in accordance with 11 Miss. Admin. Code Pt. 2, R. 2.8.B. to renew a State Permit to Operate or in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.A(1)(c). to renew a Title V Permit to be considered timely and complete, the applicant shall be registered and in good standing with the Mississippi Secretary of State to conduct business in Mississippi.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — Section A

13. Certification

Note: If approved by MDEQ, a duly authorized representative (DAR) may sign the air permit application. The DAR must be listed in Section 4 of this application.

I certify that to the best of my knowledge and belief formed after reasonable inquiry, the statements and information in this application are true, complete, and accurate, and that as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Responsible Official/DAR	Date
03/10/23	

Marc Brinkmeyer	Member
Printed Name	Title

Michael Watson
SECRETARY OF STATE

This is not an official certificate of good standing.

Name History

Name	Name Type
Hardy Technologies LLC	Legal
IFG - Lumberton	Fictitious Name

Business Information

Business Type:	Limited Liability Company
Business ID:	1236995
Status:	Good Standing
Effective Date:	09/17/2020
State of Incorporation:	DE
Principal Office Address:	687 W Canfield Avenue, Suite 100 Coeur d'Alene, ID 83815

Registered Agent

Name

NATIONAL REGISTERED AGENTS INC
645 Lakeland East Drive, Suite 101
Flowood, MS 39232

Officers & Directors

Name	Title
Marc A Brinkmeyer 687 W. Canfield Avenue, Suite 100 Coeur d'Alene, ID 83815	Manager

Section B.0: Emission Point Descriptions & Status

This form should list all the of the Emission Points and descriptions as proposed or as otherwise identified in an existing permit. This worksheet should be updated to reflect changes to the Status of the emission points over time. Emission Point ID's should match those assigned in the current MDEQ permit. Facility ID is optional. For proposed emission points, the facility should leave the Emission Point ID blank but may complete the Facility ID (if any). Under "Status," for Emission Points that are proposed or under construction but not yet operating, indicate their status as "Proposed." For emissions points already operating or for which construction has been certified complete, indicate their status as "Operating." Include all control devices for each emission point and the pollutant(s) the device controls. Control devices may be specified in general terms (e.g., baghouse, catalytic oxidizer, fabric filter, wet ESP, etc.). When an Emission Point is removed, indicate so by changing the "Status" to "Removed." Remove the emissions on the subsequent worksheets or indicate they are removed with a "-" for all pollutants.

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
AA-101		Log Debarking Operations	Operating	Enclosure	PM				
AA-102		Bark Hog and Hog Fuel Storage Pile	Operating						
AA-103		Sawmill Operations	Operating	Enclosure	PM				
AA-201	CDK # 1	Continuous Direct Fired Kiln #1-Natural Gas Only	Operating						
AA-202	CDK # 2	Continuous Direct Fired Kiln #2 Natural Gas Only	Operating						
AA-203	CDK # 3	Continuous Direct Fired Kiln #3 with dual natural gas/woodwaste burner	Operating						
AA-204		Planer Mill and Planer Shavings Cyclofilter	Operating	Cyclofilter	PM				
AA-104		Sawmill Green Chipper	Operating						
AA-205		Planer Mill Dry Chipper	Removed						
AA-206		Chip Screens # 1 and 2	Operating						
AA-207		Planer Mill Shavings Truck Bins	Operating						
AA-301		Paved Haul Roads	Operating						
AA-302		274 HP Diesel Fired Emergency Fire Water Pump	Operating						
New kiln		Proposed new kiln with dual natural gas/woodwaste burner	Proposed						

Section B.1: Maximum Uncontrolled Emissions (under normal operating conditions)

Maximum Uncontrolled Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) in Section B.3 and GHGs in Section B.4. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Emissions > 0.01 TPY must be included. Please do not change the column widths on this table.

Emission Point ID	TSP[1] (PM)		PM-10[1]		PM-2.5[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead		Total HAPs	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-101	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-102	0.08	0.06	0.04	0.03	0.01	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-103	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-201	0.32	1.31	0.57	2.24	0.57	2.24	0.03	0.10	2.21	8.16	3.71	13.71	52.72	221.50	-	-	0	0	3.64	15.2571
AA-202	0.32	1.31	0.57	2.24	0.57	2.24	0.03	0.10	2.21	8.16	3.71	13.71	52.72	221.50	-	-	0	0	3.64	15.2571
AA-203	1.64	6.90	1.24	5.20	1.18	4.95	1.13	4.16	0.93	3.90	8.28	34.80	52.72	221.50	-	-	0	0	3.56	14.95
AA-204	1.14	1.52	0.57	0.76	0.25	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-104	0.01	0.01	0.01	0.02	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-205	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-206	0.14	0.41	0.06	0.19	0.01	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-207	0.04	0.05	0.02	0.03	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-301	0.83	3.65	0.17	0.73	0.04	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-302	0.09	0.02	0.09	0.02	0.09	0.02	-	-	-	-	-	-	-	-	-	-	-	-	0.01	0.00203
New kiln	1.64	6.90	1.24	5.20	1.18	4.95	1.13	4.16	0.93	3.90	8.28	34.80	52.72	221.50	-	-	0	0	3.56	14.95
SILOCYC	1.94	3.87	0.68	1.35	0.21	0.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CYC2	0.46	1.94	0.16	0.68	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	8.66	27.95	5.42	18.69	4.16	15.59	2.30	8.52	6.27	24.12	23.98	97.01	210.87	886.00	-	-	0.00	0.00	14.41	60.4163

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.2: Proposed Allowable Emissions

Proposed Allowable Emissions (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard (e.g., a MACT standard); or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Additional columns may be added if there are regulated pollutants (other than HAPs and GHGs) emitted at the facility.

Emission Point ID	TSP[1]		PM10[1]		PM2.5[1]		SO_2		NOx		CO		VOC		TRS		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-101	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-102	0.08	0.06	0.04	0.03	0.01	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-103	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-201	0.32	1.31	0.57	2.24	0.57	2.24	0.03	0.10	2.21	8.16	3.71	13.71	52.72	221.50	-	-	0	0
AA-202	0.32	1.31	0.57	2.24	0.57	2.24	0.03	0.10	2.21	8.16	3.71	13.71	52.72	221.50	-	-	0	0
AA-203	1.64	6.90	1.24	5.20	1.18	4.95	1.13	4.16	0.93	3.90	8.28	34.80	52.72	221.50	-	-	0	0
AA-204	1.14	1.52	0.57	0.76	0.25	0.33	-	-	-	-	-	-	-	-	-	-	-	-
AA-104	0.01	0.01	0.01	0.02	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-205	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-206	0.14	0.41	0.06	0.19	0.01	0.03	-	-	-	-	-	-	-	-	-	-	-	-
AA-207	0.04	0.05	0.02	0.03	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
AA-301	0.83	3.65	0.17	0.73	0.04	0.18	-	-	-	-	-	-	-	-	-	-	-	-
AA-302	0.09	0.02	0.09	0.02	0.09	0.02	-	-	-	-	-	-	-	-	-	-	-	-
New Kiln	1.64	6.9	1.24	5.2	1.18	4.95	1.13	4.16	0.93	3.90	8.28	34.80	52.72	221.50	-	-	0	0
SILOCYC	1.94	3.87	0.68	1.35	0.21	0.43	-	-	-	-	-	-	-	-	-	-	-	-
CYC2	0.46	1.94	0.16	0.68	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
Totals	8.662	27.95	5.42	18.69	4.16	15.59	2.30	8.52	6.27	24.12	23.98	97.01	210.87	886.00	-	-	0.00	0.00

0.05269 0.001702

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		Acetaldehyde		Acrolein		Benzene		Dichlorobenzene		Formaldehyde		Hexane		Methanol		Naphthalene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-201	3.64	15.2571	0.48	2.0000	0.05	0.2000	0.00	0.0003	0.00	0.0002	0.78	3.2622	0.08	0.2937	2.14	9.0000	0.00	0.0001
AA-202	3.64	15.2571	0.48	2.0000	0.05	0.2000	0.00	0.0003	0.00	0.0002	0.78	3.2622	0.08	0.2937	2.14	9.0000	0.00	0.0001
AA-203	3.56	14.9500	0.48	2.0000	0.05	0.2000	0.00	0.0003	0.00	0.0002	0.78	3.2622	0.08	0.2937	2.14	9.0000	0.00	0.0001
AA-204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-302	0.01	0.00	0.00	0.0005	-	-	0.00	0.0006	-	-	0.00	0.0007	-	-	-	-	-	-
New Kiln	3.56	14.95	0.48	2.0000	0.04762	0.2	9.3E-05	0.00034	5.3E-05	0.0002	0.77712	3.26224	0.07941	0.29372	2.14286	9.000	2.7E-05	1E-04
Totals:	14.41	60.42	1.91	8.00047	0.19	0.8000	0.00	0.00195	0.00	0.0008	3.11	13.0497	0.32	1.1749	8.57	36.0000	0.00	0.00

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Phenol		Toluene		Xylene													
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-101	-	-	-	-	-	-												
AA-102	-	-	-	-	-	-												
AA-103	-	-	-	-	-	-												
AA-201	-	-	0.00	0.0006	-	-												
AA-202	-	-	0.00	0.0006	-	-												
AA-203	-	-	0.00	0.0006	-	-												
AA-204	-	-	-	-	-	-												
AA-104	-	-	-	-	-	-												
AA-205	-	-	-	-	-	-												
AA-206	-	-	-	-	-	-												
AA-207	-	-	-	-	-	-												
AA-301	-	-	-	-	-	-												
AA-302	-	-	0.00	0.0003	-	-												
Totals:	0.00	0.0000	0.00	0.0019	0.00	0.0000												

Section B.4: Greenhouse Gas Emissions

Applicants must report potential emission rates in SHORT TONS per year, as opposed to metric tons required by Part 98. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC[3] ton/yr					Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**298**	**25**	**22,800**	**footnote 4**						
AA-201	**mass GHG**	19,581.18		0.36	0.38							19,581.91	
	CO_2e	19,581.18		106.98	9.38								19,697.54
AA-202	**mass GHG**	19,581.18		0.36	0.38							19,581.91	
	CO_2e	19,581.18		106.98	9.38								19,697.54
AA-203	**mass GHG**	32,455.80		2.16	3.50							32,461.46	
	CO_2e	32,455.80		644.79	87.38								33,187.97
AA-302	**mass GHG**	78.78		0.00	0.00							78.78	
	CO_2e	78.78		0.24	0.10								79.12
New Kiln	**mass GHG**	32,455.80		2.16	3.50							32,461.46	
	CO_2e	32,455.80		644.79	87.38								33,187.97
	mass GHG												
	CO_2e												
	mass GHG												
	CO_2e												
	mass GHG												
	CO_2e												
	mass GHG												
	CO_2e												
	mass GHG												
	CO_2e												
	mass GHG												
	CO2e												
	mass GHG												
	CO_2e												
FACILITY TOTAL	**mass GHG**	104,152.73		5.05	7.75							104,165.52	
	CO_2e	104,152.73		1,503.78	193.63								105,850.13

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] Biogenic CO2 is defined as carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms.

[3] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[4] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[5] Greenhouse gas emissions on a **mass basis** is the ton per year greenhouse gas emission before adjustment with its GWP. Do not include biogenic CO_2 in this total.

[6] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the greenhouse gas by its GWP. Do not include biogenic CO_2e in this total.

Section B.5: Stack Parameters and Exit Conditions

Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

Emission Point ID	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Base Elevation (ft)	Exit Temp. (^{o}F)	Inside Diameter or Dimensions (ft)	Velocity (ft/sec)	Moisture by Volume (%)	Geographic Position (degrees/minutes/seconds)	
									Latitude	Longitude
AA-101	V	No	36	280.5	150	32	3526			
AA-102	V	No	36	280.5	150	32	3526		31° 0' 30.10" N	89°26' 8.31" W
AA-103	Fugitive			280.5	Ambient				31°0' 29.72" N	89°26' 14.33" W
AA-201N	V	No	36.25	280.5	150	3	3526		31° 0' 41.64" N	89°26' 12.98" W
AA-201S	V	No	36.25	280.5	150	3			31° 0' 39.51" N	89°26' 12.97" W
AA-202N	V	No	36.25	280.5	150	2.67			31° 0' 41.65" N	89°26' 11.54" W
AA-202S	V	No	36.25	280.5	150	2.67			31° 0' 39.52" N	89°26' 11.53" W
AA-203N	V	No	50	280.5	Ambient				31° 0' 41.66" N	89°26' 10.10" W
AA-203S	V	No	50	280.5					31° 0' 39.53" N	89°26' 10.09" W
AA-204	V	No	50	280.5	Ambient				31° 0' 34.35" N	89° 26' 8.66" W
AA-104	Fugitive			280.5	Ambient				31°0' 31.53" N	89°26' 10.05" W
AA-205	Indoors			280.5						
AA-206	Fugitive			280.5	Ambient				31°0' 31.53" N	89°26' 10.05" W
AA-207	Fugitive			280.5	Ambient				31° 0' 35.29" N	89° 26' 6.16" W
New kiln N	V	No	50	280.5	150	2.67			31° 0' 41.67" N	89° 26' 8.67" W
New kiln S	V	No	50	280.5	150	2.67			31° 0' 39.53" N	89° 26' 8.66" W
SILOCYC	H	No		280.5					31° 0' 39.72" N	89° 26' 7.24" W
CYC2	V	No		280.5					31° 0' 41.43" N	89° 26' 9.04" W

[1] A WAAS-capable GPS receiver should be used and in the WGS84 or NAD83 coordinate system.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-101 Log Debarking Operations

B. Process Description: Logs will go through the debarker, bark will be removed from the logs

C. Manufacturer: Bid-Comact D. Model: 22"

E. Max. Design Capacity (specify units): _____
Equivalent to: 205.48 tons/hr

F. Status: ☒ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 20 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Logs	205.48 tons/hr	205.48 tons/hr	1,800,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Debarked logs	205.48 tons/hr	205.48 tons/hr	1,800,000 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-102 Bark Hog

B. Process Description: Trimmings generated during the debarking process are routed to the bark hog

C. Manufacturer: Bid-Comact D. Model: _____

E. Max. Design Capacity (specify units): 100 tons/hr
Equivalent to: _____ tons/hr

F. Status: ☒ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 20 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Bark	50 tons/hr	100 tons/hr	600,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Hog fuel	50 tons/hr	100 tons/hr	600,000 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-103 Sawmill Operation

B. Process Description: Debarked logs are processed through the merchandiser and Sawing process o produce green lumber

C. Manufacturer: Bid Comact D. Model: _____

E. Max. Design Capacity (specify units): _____
Equivalent to: 205.48 tons/hr

F. Status: ☒ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 10 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Debarked Logs	205.48 tons/hr	205.48 tons/hr	1,800,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Green Lumber	50 MBF/hr	75 MBF/hr	400 MMBF/year
Chips	90 tons/hr	90 tons/hr	612,000 tons/ year
Sawdust	30 tons/hr	30 tons/hr	198,000 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-104 Sawmill (green) Chipper

B. Process Description: Trimmings are routed to a sawmill chipper

C. Manufacturer: Bruks D. Model: DH365 3K

E. Max. Design Capacity (specify units): 16 units
Equivalent to: 32 tons/hr

F. Status: ☒ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 10 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Trimmings	12.50 tons/hr	12.50 tons/hr	90,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Chips	90 tons/hr	90 tons/hr	612,000 tons/year
Sawdust	30 ton/hr	30 tons/hr	198,000 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment – External Combustion Sources | Section C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-201 Continous Lumber Dry Kiln (CDK #1)

B. Equipment Description: Direct fired Continuous lumber dry kiln with a 45 MMBTU/hr burner

C. Manufacturer: Deltech D. Model Yr. and No.: TBD

E. Maximum Heat Input (higher heating value): 45 MMBtu/hr F. Nominal Heat Input Capacity: 38 MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate > 70,000 Btu/hr-ft^3? ☐ Yes ☒ No

H. Use: ☐ Electrical Generation ☐ Steam ☒ Process Heat

☐ Space Heat ☐ Standby/Emergency ☐ Other (describe): _____

I. Heat Mechanism: ☒ Direct ☐ Indirect

J. Burner Type (e.g., pulverized coal, forced draft, atomizing oil, low-NO_x, etc.): Natural Gas burner

K. Additional Design Controls (e.g., FGR, etc.): _____

L. Status: ☒ Operating ☐ Proposed ☐ Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE[1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1020 Btu/scf				394,200

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment – External Combustion Sources | Section C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-202 Continous Lumber Dry Kiln (CDK #2)

B. Equipment Description: Direct fired Continuous lumber dry kiln with a 45 MMBTU/hr burner

C. Manufacturer: Deltech D. Model Yr. and No.: TBD

E. Maximum Heat Input (higher heating value): 45 MMBtu/hr F. Nominal Heat Input Capacity: 38 MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate > 70,000 Btu/hr-ft^3? ☐ Yes ☒ No

H. Use: ☐ Electrical Generation ☐ Steam ☒ Process Heat

☐ Space Heat ☐ Standby/Emergency ☐ Other (describe): _____

I. Heat Mechanism: ☒ Direct ☐ Indirect

J. Burner Type (e.g., pulverized coal, forced draft, atomizing oil, low-NO_x, etc.): Natural Gas burner

K. Additional Design Controls (e.g., FGR, etc.): _____

L. Status: ☒ Operating ☐ Proposed ☐ Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-2-22

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE[1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1020 Btu/scf				394,200

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment – External Combustion Sources | Section C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-203 Continous Lumber Dry Kiln (CDK #3)

B. Equipment Description: Direct fired Continuous lumber dry kiln with a 45 MMBTU/hr burner

C. Manufacturer: Deltech D. Model Yr. and No.: TBD

E. Maximum Heat Input (higher heating value): 45 MMBtu/hr F. Nominal Heat Input Capacity: 38 MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate > 70,000 Btu/hr-ft^3? ☐ Yes ☒ No

H. Use: ☐ Electrical Generation ☐ Steam ☒ Process Heat

☐ Space Heat ☐ Standby/Emergency ☐ Other (describe): _____

I. Heat Mechanism: ☒ Direct ☐ Indirect

J. Burner Type (e.g., pulverized coal, forced draft, atomizing oil, low-NO_x, etc.): Natural Gas burner/ Woodwaste

K. Additional Design Controls (e.g., FGR, etc.): _____

L. Status: ☐ Operating ☒ Proposed ☐ Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE[1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1020 Btu/scf				394,200

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment – External Combustion Sources | Section C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): NEW KILN Continous Lumber Dry Kiln (CDK #4)

B. Equipment Description: Direct fired Continuous lumber dry kiln with a 45 MMBTU/hr burner

C. Manufacturer: Deltech D. Model Yr. and No.: TBD

E. Maximum Heat Input (higher heating value): 45 MMBtu/hr F. Nominal Heat Input Capacity: 38 MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate > 70,000 Btu/hr-ft^3? ☐ Yes ☒ No

H. Use: ☐ Electrical Generation ☐ Steam ☒ Process Heat

☐ Space Heat ☐ Standby/Emergency ☐ Other (describe): _____

I. Heat Mechanism: ☒ Direct ☐ Indirect

J. Burner Type (e.g., pulverized coal, forced draft, atomizing oil, low-NO_x, etc.): Natural Gas burner/ Woodwaste

K. Additional Design Controls (e.g., FGR, etc.): _____

L. Status: ☐ Operating ☒ Proposed ☐ Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE[1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1020 Btu/scf				394,200

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Cyclones — Section L2

1. Cyclone Description

A. Emission Point Designation (Ref. No.): AA-204 Planer Shavings Cyclofilter

B. Equipment Description (include the process(es) that the cyclone(s) controls emissions from):
Planer shavings

C. Manufacturer: Rodrigue Metal D. Model: VR-4.85

E. Status: ☒ Operating ☐ Proposed ☐ Under Construction

2. Cyclone Data

A. Cyclone Type:

☐ Conventional ☐ High Efficiency ☐ Multiclone ☒ Other: Cyclofilter

B. Efficiency (PM): 99 % C. Gas Viscosity: _____ poise

D. Pressure Drop: 5-6 in. H_2O E. Inlet air flow rate: 89390 acfm

F. Pollutant particle diameter: _____ microns G. Baffles/Louvers? ☐ Yes ☐ No

H. Cyclone Dimensions:

1. Inlet height: 48.5 ft
2. Inlet width: 3.6 ft
3. Cylinder diameter: 16 ft
4. Cylinder height: 20.67 ft
5. Cone height: 34.8 ft
6. Outlet pipe diameter: 5 ft
7. Dust exit diameter: 4.25 ft

I. Is wet spray used? ☐ Yes ☒ No

1. No. of nozzles: _____
2. Liquid used: _____
3. Flow rate: _____ gpm
4. Make-up rate: _____ gpm

J. Fan Location: ☒ Downstream (direct emissions) ☐ Downstream (auxiliary stack)

☐ Upstream (no cap/vertical emissions) ☐ Upstream (fixed cap/diffuse emissions)

☐ Upstream (wind respondent cap/horizontal emissions)

K. How is the collected dust stored, handled, and disposed of?
Shavings will be collected in bins and shipped offsite

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-206 Chip Screens 1 & 2

B. Process Description: Chips will be passed through the screens to separate from sawdust

C. Manufacturer: B&M D. Model: 8'14'

E. Max. Design Capacity (specify units): 78 units
Equivalent to: 156 tons/hr

F. Status: ☐ Operating ☒ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 10 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction:

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Chips	90 tons/hr	90 tons/hr	612,000 tons/year
Sawdust	30 tons/hr	30 tons/hr	198,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Chips	90 tons/hr	90 tons/hr	612,000 tons/year
Sawdust	30 tons/hr	30 tons/hr	198,000 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-207 Planer Mill Shavings Truck Bins

B. Process Description: Includes the receipt, conveyance, loading of dry wood shavings into trucks

C. Manufacturer: _____ D. Model: _____

E. Max. Design Capacity (specify units): 90 units
Equivalent to: 45 tons/hr

F. Status: ☒ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 10 hrs/day 6 days/week 50 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Shavings	30 tons/hr	45 tons/hr	80,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref.: No.): AA-301 Haul Roads

B. Process Description: Fugitive emissions from the traffic in the facility's roads

C. Manufacturer: N/A D. Model: N/A

E. Max. Design Capacity (specify units): _____
Equivalent to: _____ tons/hr

F. Status: ☐ Operating ☒ Proposed ☐ Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

H. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANITITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
			265 trucks

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment – Internal Combustion Engines | Section D

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA- 302 Emergency Fire Water Pump

B. Equipment Description: _____

C. Manufacturer: TBD D. Model Yr. and No.: TBD

E. Maximum Heat Input (higher heating value): _____ MMBtu/hr

F. Rated Power: 274 hp _____ kW

G. Use: ☐ Non-emergency ☒ Emergency

Complete H through K for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: ☐ < 10 Liters ☐ 10 to <30 Liters ☐ ≥ 30 Liters

I. Engine Ignition Type: ☐ Spark Ignition ☒ Compression Ignition

J. Engine Burn Type: ☐ 4-stroke ☐ 2-stroke ☐ Rich Burn ☐ Lean Burn
(check all that apply)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.) _____

Complete L through M for Stationary Gas Turbines

L. Turbine Type: ☐ Simple Cycle ☐ Regenerative Cycle ☐ Combined Cycle
☐ Combined Heat and Power (Cogeneration)

M. Controls: ☐ Water-Steam Injection ☐ Lean Premix
☐ Other Controls (SCR, oxidation catalyst, etc.): _____

N. Status: ☐ Operating ☒ Proposed ☐ Under Construction

O. Engine manufactured date: _____ N. Engine order date: _____

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? ☐ Yes ☒ No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? ☐ Yes ☒ No

R. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Diesel					

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

1. Emission Point Description

Note: Sections 3-7 below do not have to be completed if all of the required information is provided elsewhere, such as in a report generated by EPA's TANKS software, and attached to the application.

A. Emission Point Designation (Ref. No.): AA-303

B. Product(s) Stored: Diesel fuel tank for the Emergy fire water pump

C. Status: ☒ Operating ☐ Proposed ☐ Under Construction

D. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 5-20-22

2. Tank Data

A. Tank Specifications:

1.	Design capacity	550	gallons	
2.	True vapor pressure at storage temperature:		psia @	°F
3.	Maximum true vapor pressure (as defined in §60.111b)		psia @	°F
4.	Reid vapor pressure at storage temperature:		psia @	°F
5.	Density of product at storage temperature:		lb/gal	
6.	Molecular weight of product vapor at storage temp.		lb/lbmol	

B. Tank Orientation: ☐ Vertical ☒ Horizontal

C. Type of Tank:

☐ Fixed Roof ☐ External Floating Roof ☐ Internal Floating Roof

☐ Pressure ☐ Variable Vapor Space ☐ Other: _____

D. Is the tank equipped with a Vapor Recovery System? ☐ Yes ☒ No
If yes, describe below and include the efficiency.

E. Closest City:

☐ Jackson, MS ☐ Meridian, MS ☐ Tupelo, MS ☒ Mobile, AL

☐ New Orleans, LA ☐ Memphis, TN ☐ Baton Rouge, LA

F. Is an EPA TANKS report included for this tank in the application? ☐ Yes ☒ No

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

3. Horizontal Fixed Roof Tank

A. Shell Length: TBD feet
B. Shell Diameter: _____ feet
C. Working Volume: _____ gal
D. Maximum Throughput: _____ gal/yr
E. Is the tank heated? ☐ Yes ☐ No
F. Is the tank underground? ☐ Yes ☐ No
G. Shell Color/Shade:

☐ ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☒ Gray/Light ☐ Gray/Medium ☐ Red/Primer

H. Shell Condition: ☐ Good ☐ Poor

4. Vertical Fixed Roof Tank

A. Dimensions:
1. Shell Height: _____ feet
2. Shell Diameter: _____ feet
3. Maximum Liquid Height: _____ feet
4. Average Liquid Height: _____ feet
5. Working Volume: _____ gal
6. Turnovers per year: _____
7. Maximum throughput: _____ gal/yr
8. Is the tank heated? ☐ Yes ☐ No

B. Shell Characteristics:
1. Shell Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Shell Condition: ☐ Good ☐ Poor

C. Roof Characteristics:
1. Roof Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Roof Condition: ☐ Good ☐ Poor

3. Type: ☐ Cone ☐ Dome

4. Height: _____ feet

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

5. Internal Floating Roof Tank

A. Tank Characteristics:

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Number of Columns: _____
6. Self-Supporting Roof? ☐ Yes ☐ No
7. Effective Column Diameter:
   ☐ 9”x7” Built-up Column ☐ 8” Diameter Pipe ☐ Unknown
8. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining
9. External Shell Color/Shade:
   ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
   ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
10. External Shell Condition: ☐ Good ☐ Poor
11. Roof Color/Shade:
    ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
    ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
12. Roof Condition: ☐ Good ☐ Poor

B. Rim Seal System:

1. Primary Seal: ☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted
2. Secondary Seal: ☐ Shoe-mounted ☐ Rim-mounted ☐ None

C. Deck Characteristics:

1. Deck Type: ☐ Bolted ☐ Welded
2. Deck Fitting Category: ☐ Typical ☐ Detail

6. External Floating Roof Tank

A. Tank Characteristics

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

7. Paint Condition: ☐ Good ☐ Poor

B. Roof Characteristics

1. Roof Type: ☐ Pontoon ☐ Double Deck

2. Roof Fitting Category: ☐ Typical ☐ Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: ☐ Welded ☐ Riveted

2. Primary Seal:

☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted

3. Secondary Seal

☐ None ☐ Shoe-mounted ☐ Rim-mounted ☐ Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

Pollutant[1]	Working Loss (tons/yr)	Breathing Loss (tons/yr)	Total Emissions (tons/yr)
TBD			

B. Floating Roof Emissions:

Pollutant[1]	Rim Seal Loss (tons/yr)	Withdrawal Loss (tons/yr)	Deck Fitting Loss (tons/yr)	Deck Seam Loss (tons/yr)	Landing Loss[2] (tons/yr)	Total Emissions (tons/yr)

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the Permit Application Instructions. A list of regulated air pollutants and hazardous air pollutants is provided in the Application Instructions.

2. Landing losses should be determined according to the procedures in *Organic Liquid Storage Tanks* chapter of EPA's AP-42 emission factors. If the roof is not landed at least once/yr, enter "NA".

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

1. Summary of Applicable Requirements

Provide a list of all applicable federal standards for which your facility is or will be subject to, as well as a list of all Construction Permits establishing limits or restrictions issued to your facility. The specific emission standards and limitations applicable to each emission point shall be provided on the following pages (Parts 2 and 3).

Federal Regulations:

40 CFR Part	63	Subpart	DDDD
	52.21		
	60		IIII
	63		ZZZZ

State Construction Permits[1]:

	MM/DD/YY[2]	PSD	PSD Avoidance[3]	Other
Permit to Construct issued:	3/31/21	☒	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

[1] Any Construction Permits containing requirements that are currently applicable to the facility should be addressed in this section.
[2] If the permit has been modified, give the most recent modification date.
[3] Because permits are issued on a pollutant-by-pollutant basis, a PSD permit may be significant for one pollutant while also containing PSD avoidance limits for another pollutant. Therefore, you may check multiple boxes for each permit.

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements to the level of detail needed to identify each applicable emission standard and/or work practice standard and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Applicable provisions from any relevant Permit to Construct shall also be listed. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-000	11 Miss. Admin. Code Pt. 2. R. 1.3.B.	Opacity	40%	General Observation	In
	11 Miss. Admin. Code Pt. 2, R. 1.3.D.(1)(b).	PM (filterable)	$E = 4.1(P^{0.67})$	Emissions Inventory	In
AA-103	11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).	PM (filterable) PM_{10} / $PM_{2.5}$ (filterable only)	Operational Requirement	Enclosures	In
AA-201 AA-202 AA-203	40 CFR 63.2231(a) and (b); Subpart DDDD	HAPs	Initial Notification	Included with initial application	In
	11 Miss. Admin. Code Pt. 2. R. 1.3.D(1)(b).	PM	$E = 0.8808(I^{-0.1667})$	Process knowledge/Emission Factor	In
	11 Miss. Admin. Code Pt. 2, Ch. 5. and 40 CFR 52.21(j)	VOCs (as WPP1)	4.43 lbs. / MBF (Each Kiln); 776.0 tpy (Combined Kilns; Rolling 12-Month Total)	Work Practices Emissions Inventory	In
		Dried Lumber Throughput	350.0 MMBF / Year (Combined Kilns; Rolling 12-Month Total)	Production Tracking	In
AA-204	11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).	PM (filterable) PM_{10} / $PM_{2.5}$ (filterable only)	Operational Requirement (Planer Shavings Cyclofilter)	Process not run without cyclofilter	In
AA-302	40 CFR 63.6585(a), (b) and 63.6590(c)(7); Subpart ZZZZ	HAPs	General Applicability	Comply with IIII	In

[1] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

[2] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(c).

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements to the level of detail needed to identify each applicable emission standard and/or work practice standard and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Applicable provisions from any relevant Permit to Construct shall also be listed. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
	40 CFR 60.4200(a)(2)(ii); Subpart IIII	$NMHC + NO_X$ PM	General Applicability	Certified Engine Work Practices	In
	40 CFR 60.4205(c) – Table 4, 60.4206, and 60.4211(c); Subpart IIII	NMHC + NOX	4.0 Grams per Kilowatt-Hour (or 3.0 Grams per Horsepower-Hour)		In
		PM	0.20 Grams per Kilowatt-Hour (or 0.15 Grams per Horsepower-Hour)		In
	40 CFR 60.4209(a); Subpart IIII 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	Hours of Operation	Install Non-Resettable Hour Meter	Non-resettable meter	In
	40 CFR 60.4211(f)(1) – (3); Subpart IIII	Operational Requirements	100 Hours / Calendar Year for Maintenance and Readiness Testing; 50 Hours / Calendar Year for Non-Emergency Situations	Track operational hours and reason for use	In
	11 Miss. Admin. Code Pt. 2, R. 1.3.D.1(a).	PM (filterable)	0.6 lbs. Per MMBTU / Hour Heat Input	Process knowledge	In
AA-303	11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).	Surface Coating Requirement	Apply “Light” or “White” Coating	Tank color	In

[1] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

[2] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(c).

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

3. Future Applicable Requirements

List all future applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring to be used to demonstrate compliance with each applicable requirement. Applicable provisions from any Permit to Construct for which certification of construction has not yet been submitted shall also be listed.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulation citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-201 AA-202 AA-203 New Kiln	40 CFR 63.2231(a) and (b); Subpart DDDD	HAPs	Initial Notification	Certified Engine Work Practices	Upon Construction
	11 Miss. Admin. Code Pt. 2. R. 1.3.D(1)(b).	PM	$E = 0.8808(I^{-0.1667})$	Process knowledge/Emission Factor	Upon Construction
	11 Miss. Admin. Code Pt. 2, Ch. 5. and 40 CFR 52.21(j)	VOCs (as WPP1)	4.43 lbs. / MBF (Each Kiln); 886.0 tpy (Combined Kilns; Rolling 12-Month Total)	Track operational hours and reason for use	Upon Construction
	11 Miss. Admin. Code Pt. 2, Ch. 5. and 40 CFR 52.21(j)	Dried Lumber Throughput	400 MMBF / Year (Combined Kilns; Rolling 12-Month Total)	Process knowledge	Upon Construction
Silocyc, Cyc2	11 Miss. Admin. Code Pt. 2. R. 1.3.B.	Opacity	40%	General Observation	Upon Construction
	11 Miss. Admin. Code Pt. 2, R. 1.3.D.(1)(b).	PM (filterable)	$E = 4.1(P^{0.67})$	Emissions Inventory	Upon Construction

[1] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(2). for Title V sources, I (the applicant) am certifying that I will meet future applicable requirements which will become effective during the permit term on a timely basis.

Emission Calculations (Appendix B)

Hardy Technologies
Emission Points

AA-101	Debarker	400	tons/hr
AA-102	Bark Hog	100	tons/hr
AA-103	Sawmill		
AA-201	CDK # 1	11.9047619	MBF/hr
AA-202	CDK# 2	11.9047619	MBF/hr
AA-203	CDK# 3	11.9047619	MBF/hr
new	CDK# 4	11.9047619	MBF/hr
AA-204	Planer Mill Cyclone	30	tons/hr
AA-104	Green Chipper		
AA-009	Planer Mill Chipper		tons/hr
AA-205	Chip Screen 1 & 2		
AA-207	Shavings Truck Bins	45	tons/hr
AA-301	Haul Roads		
AA-302	Emergency Fire Water Pump		

Conversion Factors

Logs	4.5	tons/MBF
Bark	0.36	tons/MBF
Chips	0.34	tons/MBF
Planer Shavings	0.2	tons/MBF
Sawdust	0.27	tons/MBF
Hogged Dry Trim	0.03	tons/MBF

	Hourly Rate		**Annual Rate**		**Annual Hours**
Logs	400.00	tons/hr	1,800,000	tons/year	8760
Bark Hog	100.00	tons-bark/hr	144,000	tons-bark/year	8760
Sawdust	30.00	tons/hr	198,000	tons/year	8760
Debarker	400.00	tons-logs/hr	1,800,000	tons-logs/yr	8760
Green Chipper	12.50	tons/hr	90,000	tons/yr	8760
Chips	90.00	tons/hr	612,000	tons/year	8760
Chip Screens	120.00	tons/hr	720,000	tons/yr	8760
Green Lumber	45.66	MBF/hr	400,000	MBF/yr	8760
Dry Lumber	47.62	MBF/hr	400,000	MBF/yr	8400
Planer Shavings	30.00	tons/hr	80,000	tons/year	
CDK Burner	45	MMbtu/hr	394,200	MMbtu/yr	8760
Firepump	274.00	bhp			500

Note: Annual Rates of residuals are limited by the kiln throughput of 415,000 MBF/yr

AA-301 Haul Roads

AP 42 Table 13.2.1-1.

Size range	Particle Size Multiplier (k) lb/VMT
PM-2.5	0.00054
PM-10	0.0022
PM-30	0.011

Eext = k (sL)0.91 x (W)1.02 x (1-P/4N) **AP-42 Eq. (2)**

N	365	days for annual
P	115	days with 0.01" precipitation AP-42 figure 13.2.1-2.
sL	0.48	Belk Chip and Saw, Resolute Cossa Pine Applications

Haul Material	Quantity	Units	Trucks/yr	Load (tons)	Avg Wgt	Round Trip Distance (miles)	PM (TPY)	PM10 (TPY)	PM2.5 (TPY)	PM10 lb/hr	PM2.5 (lb/hr)	PM (lb/hr)
Logs	1800000	tons/yr	75000	24	16	0.6	1.98	0.40	0.10	0.09	0.02	0.45
Bark	144000	tons/yr	6000	24	16	0.68	0.18	0.04	0.01	0.01	0.00	0.04
Shavings & Hogged Trim	80000	tons/yr	4444	18	16	0.64	0.12	0.02	0.01	0.01	0.00	0.028536
Chips & Sawdust	810000	tons/yr	33750	24	16	0.68	1.01	0.20	0.05	0.05	0.01	0.230236
Finished Lumber	400000	MBF/yr	15333	24	16	0.54	0.36	0.07	0.02	0.02	0.00	0.083065
						Total	**3.65**	**0.73**	**0.18**	**0.17**	**0.04**	**0.83**

Source	ID	Emission Factor			Units	Ref.	Control		Production				Emissions					
									Hourly Rate		Annual Rate		PM		PM_{10}		$PM_{2.5}$	
		PM	PM_{10}	$PM_{2.5}$			Efficiency	Basis	Rate	Units	Rate	Units	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Debarker	AA-101	0.024	0.012	0.006	lb/ton-log	1,2	100%	ring debarker- encl	400	tons-log/hr	1,800,000	tons-log/yr	0.00	0.00	0.00	0.00	0.00	0.00
Bark Hog	AA-102	0.00075	0.00035	0.00005	lb/BDT	1,3	0%		37	BDT/hr	53,280	tons/yr	0.08	0.06	0.04	0.0280	0.01	0.0040
Merchandiser	AA-103	0.035	0.0175	0.00875	lb/ton log	1,4	100%	Partially Enclosed	400	tons-log/hr	1,800,000	tons-log/yr	0.00	0.00	0.00	0.00	0.00	0.00
Sawing	AA-103	0.35	0.175	0.0875	lb/ton log	1,5	100%	Enclosed	400	tons-log/hr	1,800,000	tons-log/yr	0.00	0.00	0.00	0.00	0.00	0.00
Planer Cyclofilter	AA-204	0.038	0.019	0.008	lb/ton	6	99%		30.00	tons/yr	80,000	tons/yr	1.14	1.52	0.57	0.76	0.2460	0.33
Green Chipper	AA-104	0.00075	0.00035	0.00005	lb/BDT	1,7	0%		6.25	BDT/hr	45,000	BDT/yr	0.01	0.05	0.01	0.02	0.0009	0.00
Chip Screens	AA-206	0.00075	0.00035	0.00005	lb/BDT	1,7	0%		60	BDT/hr	360,000	BDT/yr	0.14	0.41	0.06	0.19	0.0090	0.03
Planer Shavings Truck Bin	AA-207	0.0015	0.0007	0.0001	lb/BDT	1,8	0%		26.79	BDT/hr	71,429	BDT/yr	0.04	0.05	0.02	0.03	0.0027	0.00
														2.09		1.03		0.37

1 EPA Region 10 Memo "Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, Excluding Boilers, Located in Pacific Northwest Indian Country, May 2014."

2 Emission factor is for a drum debarker, ring debarker assumed to be 10% of a drum debarker based on engineering judgement.

3 Emissions for bark hog based on drop of wet material and average of 3 drops for the material. Chipped material converted to BDT based on moisture content of 63% wet basis.

4 EF for log bucking. 90% control based on engineering judgement for partial enclosure

5 EF for sawing. Control based on total enclosure. *0.00236246 0.07181873*

6 Emission factors based on manufacturer's specifications. $PM_{2.5}$ assumed to be equal to Rex Lumber Troy BACT.

7 EF for drop of wet material and average of 3 drops for the material. Chipped material converted to BDT based on moisture content of 100% dry basis.

8 EF for drop of dry material and average of 3 drops for the material. Chipped material converted to BDT based on moisture content of 12% dry basis.

Debarker, Merchandiser & Sawing

Hourly Emissions = (EF lb/ton-log)(1-Control Efficiency)(Rate ton-logs/hr)
Annual Emissions = (EF lb/ton-log)(1-Control Efficiency)(Rate ton-logs/yr)(ton/2000 lb)

Bark Hog, Green Chipper, Planer Mill Chipper, Chip Screens

Hourly Emissions = (EF lb/BDT/drop)(1-Control Efficiency)(Rate BDT/hr)(3 drops)
Annual Emissions = (EF lb/BDT/drop)(1-Control Efficiency)(Rate BDT/yr)(3 drops)

Planer Shavings Truck Bin

Hourly Emissions = (EF lb/BDT/drop)(1-Control Efficiency)(Rate BDT/hr)(1 drops)
Annual Emissions = (EF lb/BDT/drop)(1-Control Efficiency)(Rate BDT/yr)(1 drops)

Planer Cyclofilter

Hourly Emissions = (EF lb/ton)(1-Control Efficiency)(Rate tons/hr)
Annual Emissions = (EF lb/ton)(1-Control Efficiency)(Rate tons/yr)(ton/2000 lb)

SILOCYC & CYC2 - Fuel Cyclones

Basis

Throughput based on Kiln burner capacity of 4.8 tons/hr at 52% moisture content. Hourly thruput based on 80 hrs/wk sawmill operation.

Sawdust Moisture	52%		
Throughput	10.1	tph	= (9.6 tph)(7 days/wk)(24 hr/day)/(80 hr/wk)
Throughput	4.8	BDT/hr	

Silo Cyclone

	Emission Factors			Hourly Throughput		Annual Throughput		Emissions	
Pollutant	Rate	Units	Ref.	Rate	Units	Rate	Units	lb/hr	TPY
PM	0.2	lb/BDT	1	10	BDT/hr	38,707	BDT/yr	1.9354	3.87
PM_{10}	0.07	lb/BDT	2	10	BDT/hr	38,707	BDT/yr	0.6774	1.35
$PM_{2.5}$	0.022	lb/BDT	3	10	BDT/hr	38,707	BDT/yr	0.2129	0.43
Note: Flow									

CDK3 Cyclone

	Emission Factors			Hourly Throughput		Annual		Emissions	
Pollutant	Rate	Units	Ref.	Rate	Units	Rate	Units	lb/hr	TPY
PM	0.2	lb/BDT	1	2.3	BDT/hr	19,354	BDT/yr	0.4608	1.94
PM_{10}	0.07	lb/BDT	2	2.3	BDT/hr	19,354	BDT/yr	0.1613	0.68
$PM_{2.5}$	0.022	lb/BDT	3	2.3	BDT/hr	19,354	BDT/yr	0.0507	0.21

1 EPA Region 10 Memo, May 8, 2014. Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, Excluding Boilers, Located in Pacific Northwest Indian Country

2 EPA PM Augmentation Tool, PM10 = 35%PM. 35% of Region 10 Memo factor for PM was used.

3 EPA PM Augmentation Tool, PM2.5 = 11%PM. 11% of Region 10 factor for PM was used.

Note: The Weyerhaeuser Bruce Facility included green sawdust distribution in the April 2021 PSD Application which supports the adjustement of the Region 10 cyclone factors using the PM Augmentation Tool.
Annual thruput based on continuous kiln operation at 4.8 tons/hr fuel rate.
The fuel cyclones are inherent to the fuel transfer process and emissions are considered uncontrolled.

CDK Combined Maximum Uncontrolled Emissions per Kiln

Annual Emissions = EF (lb/MBF)x Rate (MBF/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MBF) x Rate (MBF/hr)

Annual Emissions = EF (lb/MMBtu)x Rate (MMBtu/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MMBtu) x Rate (MMBtu/hr)

Pollutant	Factor	Units	Reference	Rate				Emissions	
				Hourly	Units	Annual	Units	lb/hr	TPY
PM	0.020	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.24	1.00
PM_{10}	0.020	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.24	1.00
$PM_{2.5}$	0.020	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.24	1.00
$VOC_{as\ WPP1}$	4.43	lb/MBF	2	11.9	MBF/hr	100,000	MBF/yr	52.72	221.50
Natural Gas Burners									
PM	0.0019	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.08	0.31
PM_{10}	0.0075	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.34	1.24
$PM_{2.5}$	0.0075	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.34	1.24
NO_x	0.049	lb/MMbtu	4	45	MMbtu/hr	332,880	MMbtu/yr	2.21	8.16
CO	0.082	lb/MMbtu	4	45	MMbtu/hr	332,880	MMbtu/yr	3.71	13.71
SO_2	0.0006	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.03	0.10
Lead	4.90E-07	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.00
CO2	117.6	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	5294.12	19581.18
CH_4	2.25E-03	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.10	0.38
N_2O	2.16E-03	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.10	0.36
CO_{2e}	1.18E+02	lb/MMbtu	4	45	MMbtu/hr	332,880	MMbtu/yr	5,325.58	19,697.54

1 *Region 10 Memo Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, Excluding Boilers, Located in Pacific Northwest Indian Country, May 2014. PM emissions from steam heated batch kilns.*

2 *Proposed BACT Limit*

3 *PM from natural gas burning AP-42 TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION. Converted to lb/Mmbtu using 1020 btu/scf.*

4 *AP-42 Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NOx) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION. Small boilers uncontrolled low NOx burner. Converted to lb/Mmbtu using 1020 btu/scf.*

5 *CO_2, CH_4 and N_2O converted to CO_{2e} using Global Warming Potential in Table A-1 to Subpart A of Part 98—Global Warming Potentials*

6 *Annual gas usage based on nominal heat input capacity of 38 MMBtu/hr at continuous operation.*

Name	CAS No.	Chemical formula	Global warming potential	Reference
Carbon dioxide	124-38-9	CO_2	1	Table A-1 to Subpart A of Part 98—Global Warming Potentials
Methane	74-82-8	CH_4	25	
Nitrous oxide	10024-97-2	N_2O	298	

CDK Combined Maximum Uncontrolled Emissions per Kiln (AA-203 and proposed new kiln)

Annual Emissions = EF (lb/MBF)x Rate (MBF/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MBF) x Rate (MBF/hr)

Annual Emissions = EF (lb/MMBtu)x Rate (MMBtu/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MMBtu) x Rate (MMBtu/hr)

Pollutant	Factor	Units	Reference	Rate				Emissions	
				Hourly	Units	Annual	Units	lb/hr	TPY
PM	0.138	lb/MBF	1,5	11.9	MBF/hr	100,000	MBF/yr	1.64	6.90
PM_{10}	0.104	lb/MBF	1,5	11.9	MBF/hr	100,000	MBF/yr	1.24	5.20
$PM_{2.5}$	0.099	lb/MBF	1,5	11.9	MBF/hr	100,000	MBF/yr	1.18	4.95
$VOC_{as\ WPP1}$	4.430	lb/MBF	1,5	11.9	MBF/hr	100,000	MBF/yr	52.72	221.50
NOx	0.078	lb/MBF	2	11.9	MBF/hr	100,000	MBF/yr	0.93	3.90
CO	0.696	lb/MBF	2	11.9	MBF/hr	100,000	MBF/yr	8.28	34.80
SO_2	0.0250	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	1.13	4.16
CO2	195.0	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	8775.00	32455.80
CH_4	2.10E-02	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.95	3.50
N_2O	1.30E-02	lb/MMbtu	3	45	MMbtu/hr	332,880	MMbtu/yr	0.59	2.16
CO_{2e}	1.99E+02	lb/MMbtu	4	45	MMbtu/hr	332,880	MMbtu/yr	8,972.96	33,187.97

VOC EF = Proposed BACT Limit

1 BACT Limit Based on Resolute FP US Inc. – Catawba Lumber Mill. Permit No. 2440-0216-CA November 3, 2017

2 Average of Bibler Brothers test for green sawdust burner with gasifier.

3 CO_2, CH_4 and N_2O converted to CO_{2e} using Global Warming Potential in Table A-1 to Subpart A of Part 98—Global Warming Potentials

4 Annual gas usage based on nominal heat input capacity of 38 MMBtu/hr at continuous operation.

5 Kilns are down every 90 days for maintenance

Name	CAS No.	Chemical formula	Global warming	Reference
Carbon dioxide	124-38-9	CO_2	1	Table A-1 to Subpart A of Part 98—Global Warming Potentials
Methane	74-82-8	CH_4	25	
Nitrous oxide	10024-97-2	N_2O	298	

CDK Combined Maximum Uncontrolled Emissions per Kiln (AA-201, AA-202, AA-203 and proposed new kiln)

Annual Emissions = EF (lb/MBF)x Rate (MBF/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MBF) x Rate (MBF/hr)

Annual Emissions = EF (lb/MMBtu)x Rate (MMBtu/yr)x(ton/2000 lbs)

Hourly Emissions = EF (lb/MMBtu) x Rate (MMBtu/hr)

Pollutant	Factor	Units	Reference	Rate				Emissions	
				Hourly	Units	Annual	Units	lb/hr	TPY
Methanol	0.180	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	2.14	9.0000
Formaldehyde	0.065	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.77	3.2500
Acetaldehyde	0.04	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.48	2.0000
Acrolein	0.004	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.05	0.2000
Phenol	0.010	lb/MBF	1	11.9	MBF/hr	100,000	MBF/yr	0.12	0.5000
Natural Gas Burners									
Benzene	2.06E-06	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.0003
Dichlorobenzene	1.18E-06	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.0002
Formaldehyde	7.35E-05	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.0122
Hexane	1.76E-03	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.08	0.2937
Naphthalene	5.98E-07	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.0001
Toluene	3.33E-06	lb/MMbtu	2	45	MMbtu/hr	332,880	MMbtu/yr	0.00	0.0006
								3.64	15.2571

1 *September 22, 2017, EPA Memo "Development of a Provisional Emissions Calculations Tool for Inclusion in the Final PCWP ICR", Lumber Kiln: Direct-fired: Softwood: Pine Species*

2 *AP-42 TABLE 1.4-3. Emissioin Factors for Speciated Organic Compounds from Natural Gas Combustion. Only includeds HAPs with potential greater than or equal to 0.0001 TPY.*

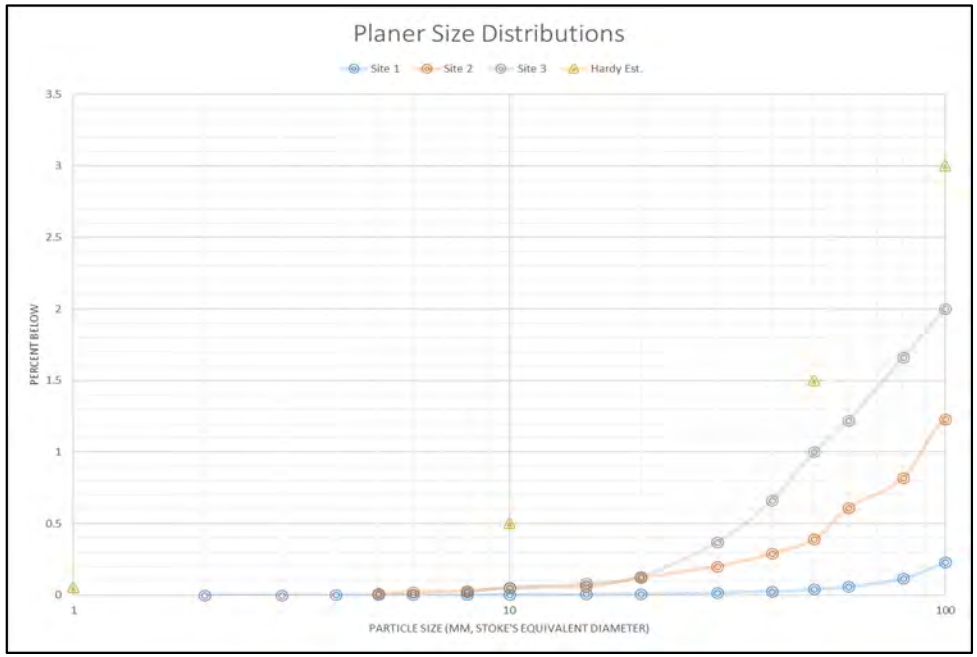
Cyclofilter Emission Factor Development

Capacity	microns	% of particles	efficiency	lb of material	Pollutant	lb of Material	EF (lb/ton)
57430	1	0.05	99.00	0.287	PM10	0.545	0.019
57430	1-10	0.45	99.90	0.258			
57430	10-50	1	99.95	0.287	TSP	1.09	0.038
57430	50-100	1.5	99.97	0.258			
57430	100-250	3	99.99	0.172			
57430	250-1000	4	100.00	0			
57430	1000	90	100.00	0			
57430		0	0	0			

Emission Factors were estimated using the manufactuer's estimates of material exiting the cyclofilter and the capacity of the unit. For example PM_{10} = (0.258 lb + 0.287 lb)/(57,430 lb x ton/2,000 lb). $PM_{2.5}$ is assumed to be equal to PM_{10}. TSP as identified on MDEQ forms is estimated as 100 microns.

The factors are a conservative estimate of the emissions from the cyclofilter. The figure illustrates the material distribution estimate compared to other planer information available used to size cyclones. Size distributions were conservatively higher than any distribution data found.

Additionally, for comparison the EPA Region 10 factors for pneumatically conveyed material through a cyclone to a bin and exiting a baghouse are 0.001, 0.000995, and 0.00099 for PM, PM_{10} and $PM_{2.5}$, respectively. Developed emission factors are conservatively orders of magnitude above the EPA factors.



FP - 274 BHP, Emergency Fire Water Pump Engine

Operation Basis

Max Power	274	bhp
Average Brake Specific Fuel Consumption	9000	Btu/hp-hr
Heat Input Capacity	2.47	MMBtu/hr
Annual Hours of Operation	500	hr/yr

Pollutant	Emission Factors			Potential Emissions	
	lb/hp-hr	lb/MMBtu	Ref.	lb/hr	tpy
PM	0.0003		1	0.0906	0.0227
PM10	0.0003		2	0.0906	0.0227
PM2.5	0.0003		2	0.0906	0.0227
VOC	0.0025		3	0.6889	0.1722
SO2	0.0021		3	0.5617	0.1404
CO	0.0057		1	1.5706	0.3926
NOx	0.0066		1	1.8122	0.4531
CO2	1.1500		3	315.1000	78.7750
CH4		0.0066	5	0.0163	0.0041
N2O		0.0013	5	0.0033	0.0008
CO2e			5	316.4798	79.1200
Acetaldehyde		0.0008	4	0.0019	0.0005
Benzene		0.0009	4	0.0023	0.0006
Formaldehyde		0.0012	4	0.0029	0.0007
Toluene		0.0004	4	0.0010	0.0003
Xylene		0.0003	4	0.0007	0.0002
POM		0.0002	4	0.0004	0.0001
Total HAPs				0.0092	0.0023

1 NSPS IIII

2 PM from internal combustion engine assued to be <1um

3 AP-42 Table 3.3-1. Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines

4 AP-42 Table 3.3-2. Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines

5 Table C-2 to Subpart C of Part 98—Default CH4 and N2O Emission Factors for Various Types of Fuel

6 CO2e determined as CO2+(25 x CH4) + (298 x N2O)

Emission Factor References (Appendix C)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
AIR, WASTE, AND TOXICS

MAY 08 2014

MEMORANDUM

SUBJECT: Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, Excluding Boilers, Located in Pacific Northwest Indian Country

FROM: Dan Meyer, Environmental Engineer
Air Permits & Diesel Unit

THRU: Donald A. Dossett, P.E., Manager
Air Permits & Diesel Unit

TO: Permit File

EPA Region 10 has compiled the attached list of particulate matter (PM – CAA § 111 pollutant, PM_{10} and $PM_{2.5}$ – criteria pollutants) emission factors ("EFs") for use in determining the potential emissions, more commonly referred to as potential to emit ("PTE"), for activities at sawmills, excluding boilers, located in Pacific Northwest Indian Country.[1] The EFs are presented in units appropriate for the particular activity. PTE generally represents the maximum capacity of a source to emit a pollutant under its physical and operational design taking into consideration restrictions that are federally enforceable. While PM, PM_{10} and $PM_{2.5}$ PTE are all used to determine applicability of the Compliance Assurance Monitoring program and Prevention of Significant Deterioration construction permit program, only PM_{10} and $PM_{2.5}$ are employed to determine applicability of the Title V operating permit program.[2]

The Federal Air Rules for Reservations ("FARR") limit particulate matter emissions from applicable activities at sawmills. The rules and the rationale for not employing them to determine PTE are as follows: (a) 20 percent opacity limit (40 CFR § 49.124) – lack of a correlation between opacity and particulate matter emissions, (b) requirements for limiting fugitive emissions (40 CFR § 49.126) – lack of a correlation between compliance with requirements and particulate matter emissions, (c) non-combustion stack 0.1 grain per dry standard cubic foot PM emission limit (40 CFR § 49.125) – resultant PTE would be unrealistically high as we assume that an unreasonable amount of wood residue is exhausted to atmosphere rather than recovered for sale or combustion in on-site boiler.

There are no other federal regulations beyond the FARR that limit particulate matter emissions from activities addressed by this memorandum. Under the circumstances, it is appropriate to employ the EFs presented in the attachment to estimate PTE, unless a more representative (e.g. site-specific) EF is available.

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[1] Activities include log bucking and debarking, sawing, lumber drying, mechanical and pneumatic conveyance of wood residue, wind erosion of wood residue piles and traffic along paved and unpaved roads.
[2] October 16, 1995 EPA memorandum entitled, "Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V"

EPA Region 10 Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, Excluding Boilers, Located in Pacific Northwest Indian Country, May 2014

EF Reference No.	Emissions Generating Activity[1]	PM[2] EF	PM_{10} % of PM	PM_{10} EF	$PM_{2.5}$ % of PM	$PM_{2.5}$ EF	Units
1, 2, 3, 4	Log Bucking[3]	0.035	50	0.0175	25	0.00875	lb/ton log
1, 2, 3, 5	Log Debarking[3]	0.024	50	0.012	25	0.006	lb/ton log
1, 2, 3, 6	Sawing[3]	0.350	50	0.175	25	0.0875	lb/ton log
1, 3, 7	Lumber Drying - Resinous Softwood Species[4]	0.02	100	0.02	100	0.02	lb/mbf
1, 3, 7	Lumber Drying - Non-Resinous Softwood Species[5]	0.05	100	0.05	100	0.05	lb/mbf
1, 2, 3, 8	"Drop" of "wet" material[5] from one surface to another including, but not limited to, (a) each mechanical conveyance drop between point of generation and storage bin (but not including bin unless open to atmosphere) (b) loadout from storage bin into a truck bed or railcar and (c) drop onto a pile. Apply EF to each "drop."	0.00075	N/A	0.00035	N/A	0.00005	lb/bdt material
1, 2, 3, 8	"Drop" of "dry" material[5] from one surface to another including, but not limited to, (a) each mechanical conveyance drop between point of generation and storage bin (but not including bin unless open to atmosphere) (b) loadout from storage bin into a truck bed or railcar and (c) drop onto a pile. Apply EF to each "drop."	0.0015	N/A	0.0007	N/A	0.0001	lb/bdt material
1, 3, 9	Pneumatically convey material[6] through medium efficiency cyclone to bin	0.5	85	0.425	50	0.25	lb/bdt material
1, 3, 9	Pneumatically convey material[6] through high efficiency cyclone to bin	0.2	95	0.19	80	0.16	lb/bdt material
1, 3, 9	Pneumatically convey material[6] through cyclone to bin. Exhaust routed through baghouse.	0.001	99.5	0.000995	99	0.00099	lb/bdt material
1, 3, 9	Pneumatically convey material[6] into target box	0.1	85	0.085	50	0.05	lb/bdt material
1, 2, 10	Wind Erosion of Pile	0.38	50	0.19	25	0.095	ton/acre-yr
1, 2, 11	Paved Roads	Emission factors based upon site-specific parameters.					lb/VMT
1, 2, 12	Unpaved Roads	Emission factors based upon site-specific parameters.					lb/VMT

Acronyms

bdt: bone dry ton

mbf: 1000 board foot lumber

VMT: vehicle mile traveled

[1] If any activity occurs within a building, reduce the PM, PM_{10} and $PM_{2.5}$ emission factor ("EF") by 100 percent (engineering judgement) as emissions struggle to escape through doorways and other openings. If an activity's by-products are evacuated pneumatically to a target box, cyclone or bag filter system, then only the associated downstream conveyance emissions are counted.

[2] PM refers to the CAA § 111 pollutant generally measured using EPA Reference Method 5 to determine the filterable fraction of particulate matter. "Particulate matter" is a term used to define an air pollutant that consists of a mixture of solid particles and liquid droplets found in the ambient air. PM does not include a condensable fraction.

[3] EF for log bucking, debarking and sawing are expressed in units of "lb/ton log" in the table above. The EF can be expressed in units of "lb/mbf" lumber as follows:

$$\text{lb/mbf} = (\text{lb PM/ton log}) \times (\text{ton/2000 lb}) \times (\text{LD lb/ft}^3) \times (\text{LRF bf lumber/ft}^3 \text{ log}) \times (1000 \text{ bf/mbf})$$

where "LD" stands for log density and "LRF" stands for log recovery factor

• LD values are species-specific and are provided by The Engineering ToolBox and are listed at http://www.engineeringtoolbox.com/weigt-wood-d_821.html

• LRF value of 6.33 bf/ft^3 log is specific to softwood species of the Pacific Coast East. See Section 2 of Appendix D to Forest Products Measurements and Conversion Factors with Special Emphasis on the U.S. Pacific Northwest. College of Forest Resources, University of Washington. 1994. See http://www.ruraltech.org/projects/conversions/briggs_conversions/briggs_append2/appendix02_combined.pdf

[4] Douglas Fir, Engelmann Spruce, Larch, Lodgepole Pine, Ponderosa Pine and Western White Pine

[5] White Fir, Western Hemlock and Western Red Cedar

[6] The "material" in this entry refers to bark, hogged fuel, green chips, dry chips, green sawdust, dry sawdust, shavings and any other woody by-product of lumber production.

<table>
<tr><th>No.</th><th>EF Reference</th></tr>
<tr><td>1</td><td>Although this activity may be subject to the FARR visible emissions limit of 20% opacity (40 CFR § 124(d)), the limit was not further considered in deriving an emission factor due to the lack of a correlation between opacity and particulate matter emissions.</td></tr>
<tr><td>2</td><td>Although this activity may be subject to the FARR requirements for limiting fugitive particulate matter emissions (40 CFR §126), those requirements were not further considered in deriving an emission factor due to lack of a correlation between compliance with requirements and particulate matter emissions.</td></tr>
<tr><td>3</td><td>Although this activity may be subject to the FARR stack PM emission limit of 0.1 gr/dscf (40 CFR § 125(d)(3)), that limit was not further considered in deriving an emission factor because the resultant PTE would be unrealistically high.</td></tr>
<tr><td>4</td><td>For PM, PM_{10}, and $PM_{2.5}$ EF, apply engineering judgement to estimate that log bucking emissions are one-tenth sawing emissions. EPA has stated that log bucking is normally a negligible source of fugitive PM emissions. See page 2-125 of Assessment of Fugitive Particulate Emission Factor for Industrial Processes, EPA-450/3-78-107, September 1978. The document can be downloaded from internet at http://nepis.epa.gov/Simple.html by entering EPA publication number. For sawing emissions details, see Reference No. 3 below.</td></tr>
<tr><td>5</td><td>• For PM EF, see Table 2-47 of Assessment of Fugitive Particulate Emission Factor for Industrial Processes, EPA-450/3-78-107, September 1978. See also Table 2-59 of Technical Guidance for Controls of Industrial Process Fugitive Particulate Emissions, EPA-450/3-77-010, March 1977. Both documents can be downloaded from internet at http://nepis.epa.gov/Simple.html by entering EPA publication number. EPA revoked the PM EF from WebFIRE on January 1, 2002. See detailed search results for SCC 3-07-008-01 (include revoked factors) at http://cfpub.epa.gov/webfire/index.cfm?action=fire.detailedSearch
• For PM_{10} and $PM_{2.5}$ EF, apply engineering judgement to estimate that (a) PM_{10} emissions are one-half PM emissions and (b) $PM_{2.5}$ emissions are one-half PM_{10} emissions.</td></tr>
<tr><td>6</td><td>• Sawing consists of the following cummulative activities: breaking the log into cants and flitches with a smooth edge, breaking cant further down into multiple flitches and/or boards, taking the flitch and trim off all irregular edges to leave four-sided lumber and trimming to square the ends.
• For PM EF, see Table 2-47 of Assessment of Fugitive Particulate Emission Factor for Industrial Processes, EPA-450/3-78-107, September 1978. See also Table 2-59 of Technical Guidance for Controls of Industrial Process Fugitive Particulate Emissions, EPA-450/3-77-010, March 1977. Both documents can be downloaded from internet at http://nepis.epa.gov/Simple.html by entering EPA publication number. EPA revoked the PM EF from WebFIRE on January 1, 2002. See detailed search results for SCC 3-07-008-01 (include revoked factors) at http://cfpub.epa.gov/webfire/index.cfm?action=fire.detailedSearch
• For PM_{10} and $PM_{2.5}$ EF, apply engineering judgement to estimate that (a) PM_{10} emissions are one-half PM emissions and (b) $PM_{2.5}$ emissions are one-half PM_{10} emissions.</td></tr>
<tr><td>7</td><td>• For PM EF, see ODEQ ACDP Application Guidance AQ-EF02 (4/25/00). Douglas fir is a resinous softwood species and western hemlock is a non-resinous softwood species.
• For PM_{10} and $PM_{2.5}$ EF, apply engineering judgement to estimate that all PM emitted is organic aerosols and fully PM_{10} and $PM_{2.5}$ emissions.</td></tr>
<tr><td>8</td><td>• See Section 13.2.4 of EPA's AP-42, November 2006 at http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0204.pdf. Apply Equation 1 on page 13.2.4-4 to estimate emissions resulting from material drops as follows: E [lb PM/ton] = (k) X (0.0032) X $(U/5)^{1.3}$ / $(M/2)^{1.4}$

Wet Material Drop
<table>
<tr><th>Particulate</th><th>k</th><th>0.0032</th><th>$(U/5)^{1.3}$</th><th>$(M/2)^{1.4}$</th><th>lb PM / ton</th></tr>
<tr><td>PM</td><td>0.74</td><td rowspan="3">0.0032</td><td rowspan="3">6.6693</td><td rowspan="3">21.0552</td><td>0.00075</td></tr>
<tr><td>PM_{10}</td><td>0.35</td><td>0.00035</td></tr>
<tr><td>$PM_{2.5}$</td><td>0.053</td><td>0.00005</td></tr>
</table>
The following conservative assumptions were made in applying Equation 1:
Mean wind speed (U) = 15 miles per hour
$(U/5)^{1.3}$ = 6.66930
Material moisture content (M) = 34 percent. Value based upon observations
$(M/2)^{1.4}$ = 21.05520

Note: • Mean wind speed of 15 mph is a reasonable upper bounder estimate.
• Moisture content of 34 percent for "wet" material is based upon observation that average moisture content (dry basis) of green douglas fir lumber (common to the Pacific Northwest) is 51 percent as recorded prior to lab scale kiln VOC emissions testing conducting by Oregon State University's Mike Milota and organized in Microsoft Excel workbook entitled, "EPA Region 10 HAP and VOC Emission Factors for Lumber Drying, December 2012." 51 percent moisture content (dry basis) is equivalent to 34 percent moisture content (wet basis) as illustrated below:
MCD = MCW / (1-MCW); where
MCD: moisture content dry basis
MCW: moisture content wet basis

0.51 = MCW / (1 - MCW)
0.51 - (0.51)(MCW) = MCW
(1.51)(MCW) = 0.51
MCW = 0.34, or 34 percent</td></tr>
</table>

Dry Material Drop

Particulate	k × 0.0032 × $(U/5)^{1.3}$ / $(M/2)^{1.4}$ = lb PM / ton				
PM	0.74	0.0032	6.6693	10.5552	0.0015
PM_{10}	0.35				0.0007
$PM_{2.5}$	0.053				0.0001

The following conservative assumptions were made in applying Equation 1:

Mean wind speed (U) = 15 miles per hour

$(U/5)^{1.3}$ = 6.6693

Material moisture content (M) = 13 percent

$(M/2)^{1.4}$ = 10.5552

Note:
- Mean wind speed of 15 mph is a reasonable upper bounder estimate.
- Moisture content of 13 percent for "dry" material is based upon observation that typical moisture content (dry basis) of kiln-dried lumber is 15 percent as recorded during lab scale kiln emissions testing conducting by Oregon State University's Mike Milota and organized in Microsoft Excel workbook entitled, "EPA Region 10 HAP and VOC Emission Factors for Lumber Drying, December 2012." 15 percent moisture content (dry basis) is equivalent to 13 percent moisture content (wet basis) as illustrated below:

MCD = MCW / (1-MCW); where

MCD: moisture content dry basis

MCW: moisture content wet basis

0.15 = MCW / (1 - MCW)

0.15 - (0.15)(MCW) = MCW

(1.15)(MCW) = 0.15

MCW = 0.13, or 13 percent

9	• For PM EF, see Oregon Department of Environmental Quality (ODEQ) Wood Products Emission Factors, AQ-EF02 Revised 08/01/11. http://www.deq.state.or.us/aq/permit/acdp/docs/AQ-EF02.pdf • For PM_{10} and $PM_{2.5}$ EF, see ODEQ Wood Products Emission Factors - $PM_{10}/PM_{2.5}$ Fractions, AQ-EF03 Revised 08/01/11. http://www.deq.state.or.us/aq/permit/acdp/docs/AQ-EF03.pdf
10	• For PM EF, see last row of Table 11.9-4 on page 11.9-11 of Section 11.9 of EPA's AP-42, July 1998 at http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s09.pdf. • For PM_{10} and $PM_{2.5}$ EF, apply engineering judgement to estimate that (a) PM_{10} emissions are one-half PM emissions and (b) $PM_{2.5}$ emissions are one-half PM_{10} emissions.
11	See Equation 1 on page 13.2.1-4 of Chapter 13.2.1 of AP-42, January 2011 at http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0201.pdf
12	See Equation 1a on page 13.2.2-4 of Chapter 13.2.2 of AP-42, November 2006 at http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0204.pdf

13.2.1.3 Predictive Emission Factor Equations[10,29]

The quantity of particulate emissions from resuspension of loose material on the road surface due to vehicle travel on a dry paved road may be estimated using the following empirical expression:

$$E = k\,(sL)^{0.91} \times (W)^{1.02} \quad (1)$$

where: E = particulate emission factor (having units matching the units of k),
k = particle size multiplier for particle size range and units of interest (see below),
sL = road surface silt loading (grams per square meter) (g/m^2), and
W = average weight (tons) of the vehicles traveling the road.

It is important to note that Equation 1 calls for the average weight of all vehicles traveling the road. For example, if 99 percent of traffic on the road are 2 ton cars/trucks while the remaining 1 percent consists of 20 ton trucks, then the mean weight "W" is 2.2 tons. More specifically, Equation 1 is *not* intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor should be calculated to represent the "fleet" average weight of all vehicles traveling the road.

The particle size multiplier (k) above varies with aerodynamic size range as shown in Table 13.2.1-1. To determine particulate emissions for a specific particle size range, use the appropriate value of k shown in Table 13.2.1-1.

To obtain the total emissions factor, the emissions factors for the exhaust, brake wear and tire wear obtained from either EPA's MOBILE6.2 [27] or most recent MOVES [29] software model should be added to the emissions factor calculated from the empirical equation.

Table 13.2.1-1. PARTICLE SIZE MULTIPLIERS FOR PAVED ROAD EQUATION

Size range[a]	Particle Size Multiplier k[b]		
	g/VKT	g/VMT	lb/VMT
PM-2.5[c]	0.15	0.25	0.00054
PM-10	0.62	1.00	0.0022
PM-15	0.77	1.23	0.0027
PM-30[d]	3.23	5.24	0.011

[a] Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.

[b] Units shown are grams per vehicle kilometer traveled (g/VKT), grams per vehicle mile traveled (g/VMT), and pounds per vehicle mile traveled (lb/VMT). The multiplier k includes unit conversions to produce emission factors in the units shown for the indicated size range from the mixed units required in Equation 1.

[c] The k-factors for $PM_{2.5}$ were based on the average $PM_{2.5}$:PM_{10} ratio of test runs in Reference 30.

[d] PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

Equation 1 is based on a regression analysis of 83 tests for PM-10.[3, 5-6, 8, 27-29, 31-36] Sources tested include public paved roads, as well as controlled and uncontrolled industrial paved roads. The majority of tests involved freely flowing vehicles traveling at constant speed on relatively level roads. However, 22 tests of slow moving or "stop-and-go" traffic or vehicles under load were available for inclusion in the data base.[32-36] Engine exhaust, tire wear and break wear were subtracted from the emissions measured in the test programs prior to stepwise regression to determine Equation 1.[37, 39] The equations retain the quality rating of A (D for PM-2.5), if applied within the range of source conditions that were tested in developing the equation as follows:

Silt loading:	0.03 - 400 g/m^2 0.04 - 570 grains/square foot (ft^2)
Mean vehicle weight:	1.8 - 38 megagrams (Mg) 2.0 - 42 tons
Mean vehicle speed:	1 - 88 kilometers per hour (kph) 1 - 55 miles per hour (mph)

The upper and lower 95% confidence levels of equation 1 for PM_{10} is best described with equations using an exponents of 1.14 and 0.677 for silt loading and an exponents of 1.19 and 0.85 for weight. Users are cautioned that application of equation 1 outside of the range of variables and operating conditions specified above, e.g., application to roadways or road networks with speeds above 55 mph and average vehicle weights of 42 tons, will result in emission estimates with a higher level of uncertainty. In these situations, users are encouraged to consider an assessment of the impacts of the influence of extrapolation to the overall emissions and alternative methods that are equally or more plausible in light of local emissions data and/or ambient concentration or compositional data.

To retain the quality rating for the emission factor equation when it is applied to a specific paved road, it is necessary that reliable correction parameter values for the specific road in question be determined. With the exception of limited access roadways, which are difficult to sample, the collection and use of site-specific silt loading (sL) data for public paved road emission inventories are strongly recommended. The field and laboratory procedures for determining surface material silt content and surface dust loading are summarized in Appendices C.1 and C.2. In the event that site-specific values cannot be obtained, an appropriate value for a paved public road may be selected from the values in Table 13.2.1-2, but the quality rating of the equation should be reduced by 2 levels.

Equation 1 may be extrapolated to average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual (or other long-term) average emissions are inversely proportional to the frequency of measurable (> 0.254 mm [0.01 inch]) precipitation by application of a precipitation correction term. The precipitation correction term can be applied on a daily or an hourly basis [26, 38].

For the daily basis, Equation 1 becomes:

$$E_{ext} = [\, k\,(sL)^{0.91} \times (W)^{1.02} \,]\,(1 - P/4N) \qquad (2)$$

where k, sL, W, and S are as defined in Equation 1 and

E_{ext} = annual or other long-term average emission factor in the same units as k,

P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period, and

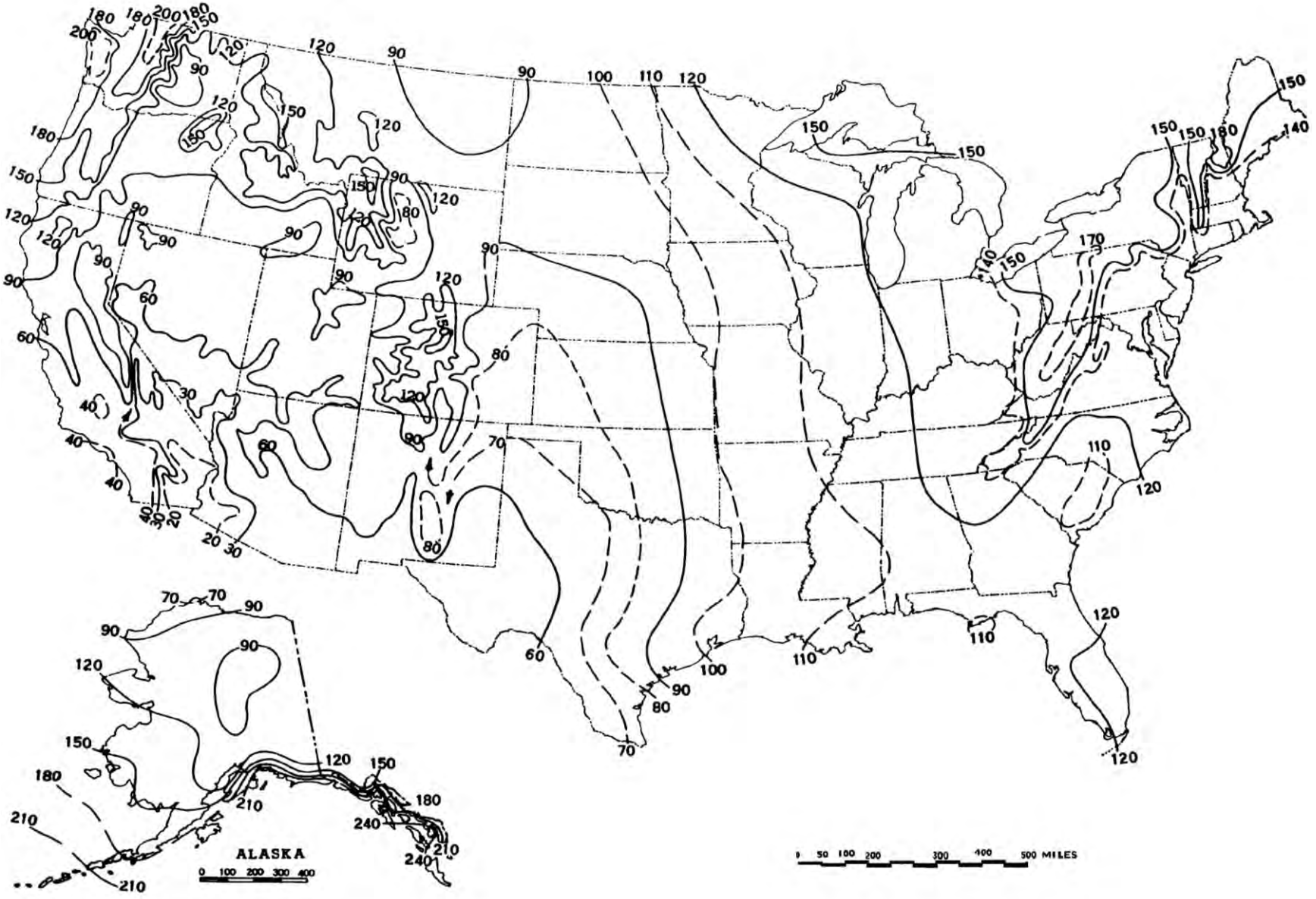
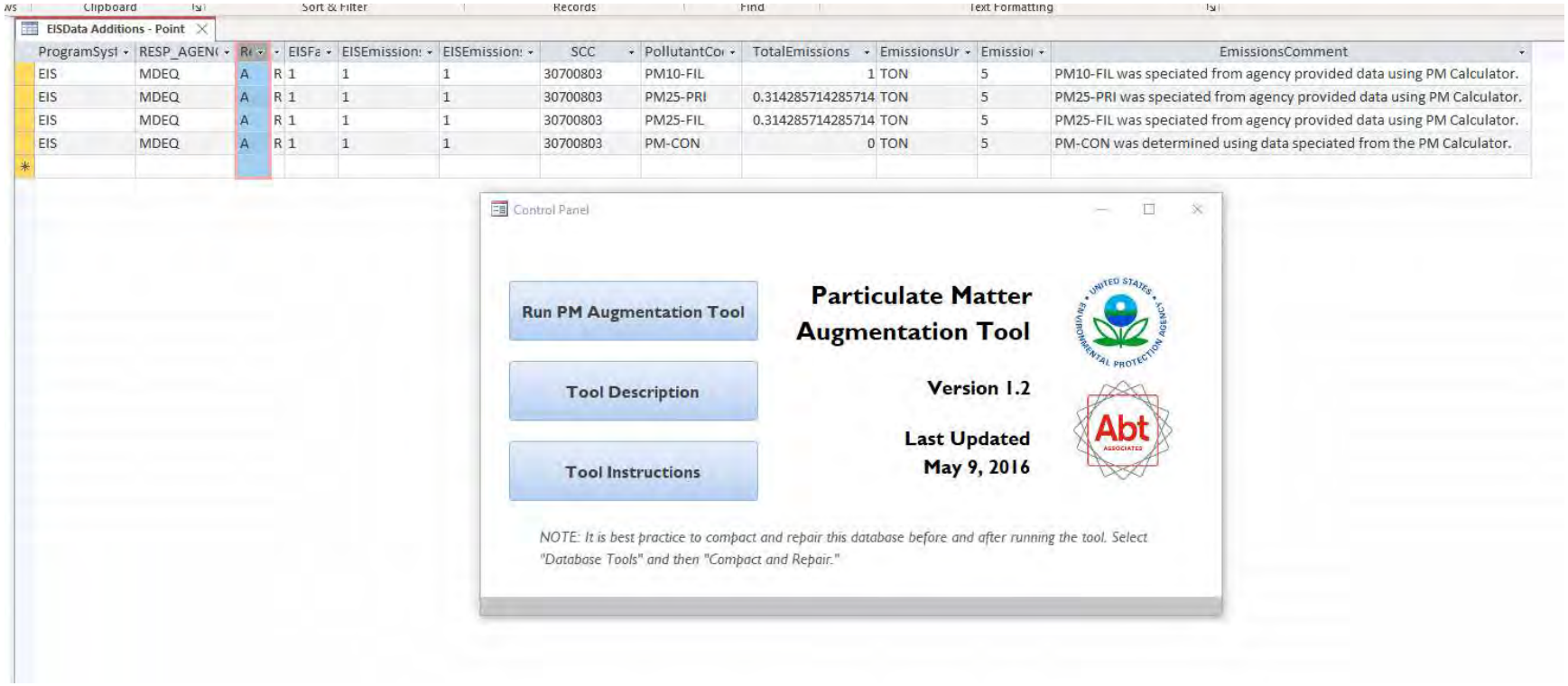


Figure 13.2.1-2. Mean number of days with 0.01 inch or more of precipitation in the United States.



Mission Forest Products reference checked. Augmentation Tool would not accept PM-FIL. PM2.5 was confirmed as 31.4% PM10, which matches the Mission Forest Products reference of 35% PM10 and 11% PM2.5.

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $lb/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION[a]

Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
CO_2[b]	120,000	A
Lead	0.0005	D
N_2O (Uncontrolled)	2.2	E
N_2O (Controlled-low-NO_X burner)	0.64	E
PM (Total)[c]	7.6	D
PM (Condensable)[c]	5.7	D
PM (Filterable)[c]	1.9	B
SO_2[d]	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $lb/10^6$ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 scf] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, $4.2x10^4$ $lb/10^6$ scf.

[c] All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM_{10}, $PM_{2.5}$ or PM_1 emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content is natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION[a]

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene[b, c]	2.4E-05	D
56-49-5	3-Methylcholanthrene[b, c]	<1.8E-06	E
	7,12-Dimethylbenz(a)anthracene[b,c]	<1.6E-05	E
83-32-9	Acenaphthene[b,c]	<1.8E-06	E
203-96-8	Acenaphthylene[b,c]	<1.8E-06	E
120-12-7	Anthracene[b,c]	<2.4E-06	E
56-55-3	Benz(a)anthracene[b,c]	<1.8E-06	E
71-43-2	Benzene[b]	2.1E-03	B
50-32-8	Benzo(a)pyrene[b,c]	<1.2E-06	E
205-99-2	Benzo(b)fluoranthene[b,c]	<1.8E-06	E
191-24-2	Benzo(g,h,i)perylene[b,c]	<1.2E-06	E
207-08-9	Benzo(k)fluoranthene[b,c]	<1.8E-06	E
106-97-8	Butane	2.1E+00	E
218-01-9	Chrysene[b,c]	<1.8E-06	E
53-70-3	Dibenzo(a,h)anthracene[b,c]	<1.2E-06	E
25321-22-6	Dichlorobenzene[b]	1.2E-03	E
74-84-0	Ethane	3.1E+00	E
206-44-0	Fluoranthene[b,c]	3.0E-06	E
86-73-7	Fluorene[b,c]	2.8E-06	E
50-00-0	Formaldehyde[b]	7.5E-02	B
110-54-3	Hexane[b]	1.8E+00	E
193-39-5	Indeno(1,2,3-cd)pyrene[b,c]	<1.8E-06	E
91-20-3	Naphthalene[b]	6.1E-04	E
109-66-0	Pentane	2.6E+00	E
85-01-8	Phenanathrene[b,c]	1.7E-05	D
74-98-6	Propane	1.6E+00	E

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION (Continued)

CAS No.	Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
129-00-0	Pyrene[b, c]	5.0E-06	E
108-88-3	Toluene[b]	3.4E-03	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $1b/10^6$ scf to lb/MMBtu, divide by 1,020. Emission Factors preceeded with a less-than symbol are based on method detection limits.

[b] Hazardous Air Pollutant (HAP) as defined by Section 112(b) of the Clean Air Act.

[c] HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act.

[d] The sum of individual organic compounds may exceed the VOC and TOC emission factors due to differences in test methods and the availability of test data for each pollutant.

AIR EMISSIONS TEST

BIBLER BROTHERS LUMBER COMPANY

SN-7G -- CONTINUOUS DRY KILN AND WOOD BURNER

PERMIT NO. 1628-AOP-R5
AFIN 58-00014

Russellville, Arkansas
March 12, 2009

Bibler Brothers Lumber Company
2401 South Arkansas Avenue
Russellville, Arkansas 72801

Corrections made appear in red. Error in the calculated site specific f-factor resulted in over estimate of emissions.

Performed by:

ENVIRONMENTAL MONITORING LABORATORIES, INC.

624 Ridgewood Road
P.O. Box 655
Ridgeland, Mississippi 39158

Phone: (601)856-3092
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EXECUTIVE SUMMARY OF STACK EMISSIONS TEST

April 8, 2009

Subject: Bibler Brothers Lumber Company – Russellville, Arkansas
Triple Length Continuous Kiln

On March 12, 2009, Environmental Monitoring Laboratories performed air emissions tests for Bibler Brothers Lumber Mill in Russellville, Arkansas. Testing was performed to measure particulate, nitrogen oxide (NOx), carbon monoxide (CO), volatile organic compounds (VOC (as C)), and formaldehyde (HCHO) emissions from the SN-7G -- continuous dry kiln and wood burner. This testing was done in accordance with condition SC-28 of the Permit NO. 1628-AOP-R5 administered by the Arkansas Department of Environmental Quality (ADEQ).

Results of the test:

	#/hr	concentration	#/MBF
Particulate	0.866	0.0028 grains/dscf	0.092
CO	2.887	19	0.308
NOx	1.146	4.5	0.122
VOC (as C)	22.39	332	2.386
HCHO	0.250	1.5	0.027

Mr. Keith Zimmerman of Environmental Enterprise Group coordinated the testing project. Mr. Matt Hagenlocker of Bibler Brothers supervised on site efforts. Mr. Brent Day of the ADEQ was present to witness the testing. Danny Russell and Bill Norwood of Environmental Monitoring Laboratories were responsible for sample collection. Formaldehyde samples were shipped to Enthalpy Analytical in Durham, NC for analysis.

Following is a report of the test.

1.0 TEST RESULTS

The following table is a summary of the measured flow parameters and test results for air emissions testing done on March 12, 2009, for the triple length continuous kiln and wood burner at Bibler Brothers Lumber Company in Russellville, Arkansas.

PM, CO, NOx, VOC and Formaldehyde Emissions Test - March 12, 2009

Run No.		1	2	3	AVG.
Date		03/12/09	03/12/09	03/12/09	-------
Time Start		1031	1229	1509	-----
Time End		1135	1331	1612	-----
PARTICULATE EMISSIONS	#/hr	1.121	0.664	0.811	0.866
PARTICULATE EMISSIONS, total	grains/dscf	0.0034	0.0022	0.0028	0.0028
PARTICULATE EMISSIONS, total	#/MBF	0.119	0.071	0.086	0.092
VOC EMISSIONS as Carbon	#/hr	26.446	24.829	15.883	22.386
VOC EMISSIONS as Carbon	ppm	372.6	373.7	250.9	332.4
VOC EMISSIONS as Carbon	#/MBF	2.818	2.646	1.693	2.386
NOx EMISSIONS	#/hr	0.925	1.176	1.339	1.147
NOx EMISSIONS	ppm	3.4	4.6	5.5	4.5
NOx EMISSIONS	#/MBF	0.099	0.125	0.143	0.122
CO EMISSIONS	#/hr	2.716	2.976	2.969	2.887
CO EMISSIONS	ppm	16.4	19.2	20.1	18.6
CO EMISSIONS	#/MBF	0.289	0.317	0.316	0.308
HCHO EMISSIONS	#/hr	0.248	0.249	0.253	0.250
HCHO EMISSIONS	ppm	1.4	1.5	1.6	0.0
HCHO EMISSIONS	#/MBF	0.0265	0.0265	0.0270	0.0267
FUEL BURN RATE	#/hr	5650	5297	5385	5444
HEAT INPUT	MM Btu/hr	21.07	21.08	21.99	21.38
THROUGHPUT	BF/hr	9384	9384	9384	9384
VOLUMETRIC FLOW RATE [1]	dscfm	37966	35534	33862	35787
VOLUMETRIC FLOW RATE	acfm	978	1081	1020	1026
VOLUMETRIC FLOW RATE	dscfm	765	833	801	800
VELOCITY	ft./sec.	15.6	17.3	16.3	16.4
STACK TEMPERATURE	°F	131	131	129	130
MOISTURE	%	13.2	14.4	13.2	13.6
SAMPLE RATE	% Isokinetic	92.3	91.5	94.3	92.7

[1] Total volumetric flow rate was calculated from the measured oxygen content, measured fuel burn rate, and an F-Factor of ~~11936~~ 9796 for the mixed wood fuel.

Calculation of the site specific F-Factor

	R1	R2	R3	AVG		
Moisture	54.16	54.05	53.96	54.06	%	
Carbon	52.77	52.98	52.59	52.78	%	dry basis
Hydrogen	5.95	5.97	5.88	5.93	%	dry basis
Nitrogen	0.16	0.13	0.16	0.15	%	dry basis
Sulfur	0.01	0.01	0.01	0.01	%	dry basis
~~Ash~~	~~0.01~~	~~0.001~~	~~0.001~~	~~0.00~~	%	~~dry basis~~
Ash ~~Oxygen~~	0.53	0.57	0.58	0.56	%	dry basis
Oxygen	40.62	40.37	40.81			
GCV	8136	8661	8870	8556	Btu/dry lb.	(heat value dry basis)
GCV	3730	3980	4084	3931	Btu/wet lb.	(heat value wet basis)

$F = 10^6 * [3.64(\%H)+1.53(\%C)+.57(\%S)+0.14(\%N)-0.46(\%O)]/GCV$

F =	12559	11841	11457	11936
	10292.4	9726.81	9371	

AIR EMISSIONS TEST

BIBLER BROTHERS LUMBER COMPANY

SN-13G – NO. 1 CONTINUOUS DRY KILN AND WOOD BURNER

PERMIT NO. 1628-AOP-R5
AFIN 58-00014

Russellville, Arkansas
February 23, 2010

Bibler Brothers Lumber Company
2401 South Arkansas Avenue
Russellville, Arkansas 72801

Performed by:

ENVIRONMENTAL MONITORING LABORATORIES, INC.

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EXECUTIVE SUMMARY OF STACK EMISSIONS TEST

April 25, 2010

Subject: Bibler Brothers Lumber Company – Russellville, Arkansas
Triple Length Continuous Kiln

On February 23, 2010, Environmental Monitoring Laboratories performed air emissions tests for Bibler Brothers Lumber Mill in Russellville, Arkansas. Testing was performed to measure particulate, nitrogen oxide (NOx), carbon monoxide (CO), volatile organic compounds (VOC (as C)), and formaldehyde (HCHO) emissions from the SN-13G – No. 1 continuous dry kiln and wood burner. This testing was done in accordance with requirements of Permit NO. 1628-AOP-R5 administered by the Arkansas Department of Environmental Quality (ADEQ).

Results of the test:

	#/hr	concentration	#/MBF
Particulate	0.457	0.0042 grains/dscf	0.042
CO	11.21	201 ppm	1.018
NOx	0.376	4.1 ppm	0.034
VOC (as C)	41.22	1722 ppm	3.741
HCHO	0.775	13 ppm	0.0704

Mr. Keith Zimmerman of Environmental Enterprise Group coordinated the testing project. Mr. Matt Hagenlocker of Bibler Brothers supervised on site efforts. Mr. Brent Day and Ms Shanetta Brown of the ADEQ were present to witness the testing. Danny Russell and Bill Norwood of Environmental Monitoring Laboratories were responsible for sample collection. Formaldehyde samples were shipped to Enthalpy Analytical in Durham, NC for analysis.

Following is a report of the test.

1.0 TEST RESULTS

The following table is a summary of the measured flow parameters and test results for air emissions testing done on February 23, 2010, for the SN-13G No. 1 continuous kiln and wood burner at Bibler Brothers Lumber Company in Russellville, Arkansas.

PM, CO, NOx, VOC and Formaldehyde Emissions Test - February 23, 2010

Run No.		1	2	3	AVG.
Date		02/23/10	02/23/10	02/23/10	-------
Time Start		1228	1435	1625	-----
Time End		1332	1539	1729	-----
PARTICULATE EMISSIONS	#/hr	0.457	0.507	0.407	0.457
PARTICULATE EMISSIONS, total	grains/dscf	0.0043	0.0045	0.0037	0.0042
PARTICULATE EMISSIONS, total	#/MBF	0.042	0.046	0.037	0.042
VOC EMISSIONS as Carbon	#/hr	33.996	47.368	42.283	41.216
VOC EMISSIONS as Carbon	ppm	1481.9	1929.2	1753.3	1721.5
VOC EMISSIONS as Carbon	#/MBF	3.085	4.299	3.838	3.741
NOx EMISSIONS	#/hr	0.322	0.347	0.460	0.376
NOx EMISSIONS	ppm	3.7	3.7	5.0	4.1
NOx EMISSIONS	#/MBF	0.029	0.031	0.042	0.034
CO EMISSIONS	#/hr	9.820	12.756	11.060	11.212
CO EMISSIONS	ppm	183.5	222.6	196.6	200.9
CO EMISSIONS	#/MBF	0.891	1.158	1.004	1.018
HCHO EMISSIONS	#/hr	0.414	0.981	0.931	0.775
HCHO EMISSIONS	ppm	7.2	16.0	15.4	12.9
HCHO EMISSIONS	#/MBF	0.0376	0.0890	0.0845	0.0704
FUEL BURN RATE	#/hr	5294	5372	5232	5299
HEAT INPUT	MM Btu/hr	21.28	21.59	21.03	21.30
THROUGHPUT	BF/hr	11018	11018	11018	11018
VOLUMETRIC FLOW RATE [1]	dscfm	12270	13133	12899	12767
VOLUMETRIC FLOW RATE	acfm	930	1219	1258	1136
VOLUMETRIC FLOW RATE	dscfm	672	760	759	730
VELOCITY	ft./sec.	14.9	19.5	20.1	18.2
STACK TEMPERATURE	°F	145	171	169	162
MOISTURE	%	16.6	25.0	27.6	23.1
SAMPLE RATE	% Isokinetic	94.1	97.5	101.3	97.6

[1] Total volumetric flow rate was calculated from the measured oxygen content, measured fuel burn rate, and an F-Factor of 9095 for the mixed wood fuel.

S.C. Department of Health and Environmental Control

Bureau of Air Quality
Final Determination

Resolute FP US Inc. – Catawba Lumber Mill
5300 Cureton Ferry Road
Catawba, South Carolina 29704
York County

Permit No. 2440-0216-CA
November 3, 2017

This review was performed by the Bureau of Air Quality of the South Carolina Department of Health and Environmental Control in accordance with South Carolina Regulations for the Prevention of Significant Air Quality Deterioration.

Reviewed by:

Katharine K. Buckner
Permit Writer
Bureau of Air Quality

Approved by:

Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality

4.0 Final Determination

The final BACT Determinations are summarized in Table 2.

Table 2 – Summary of BACT

Process	Pollutant	BACT Limit	Control Method
Debarking and Log Sawing	Filterable PM	1.0E-03 lb/ton material removed, each	Enclosure of operations and proper maintenance and good operating practices
	Filterable PM_{10}	3.8E-04 lb/ton material removed, each	
	Filterable $PM_{2.5}$	1.53E-04 lb/ton material removed, each	
3 Continuous, Direct-Fired Lumber Kilns	Total PM	0.14 lb/MBF	Proper maintenance and good operating practices
	Total PM_{10}	0.104 lb/MBF	
	Total $PM_{2.5}$	0.099 lb/MBF	
	VOC	5.82 lb/MBF	Work Practice Standards
	CO	0.73 lb/MBF	Proper maintenance and good operating practices
	CO_2	206.79 lb/million Btu	Use of energy efficient design
	CH_4	1.59E-02 lb/million Btu	
	N_2O	7.94E-03 lb/million Btu	
Startup emissions from the three Kilns	Total PM	2.83 lb/ton wood combusted	Good combustion practices
	Total PM_{10}	2.70 lb/ton wood combusted	
	Total $PM_{2.5}$	2.22 lb/ton wood combusted	
3 Kiln Fuel Silos	Filterable PM	0.01 gr/dscf, each silo	Proper maintenance and good operating practices, to include inherent cyclones
	Filterable PM_{10}	0.0035 gr/dscf, each silo	
	Filterable $PM_{2.5}$	0.0011 gr/dscf, each silo	
Planer Mill Shavings Silo	Filterable PM	0.002 gr/dscf, each silo	Proper maintenance and good operating practices, to include inherent bin vent filter
	Filterable PM_{10}	0.0007 gr/dscf, each silo	
	Filterable $PM_{2.5}$	0.00022 gr/dscf, each silo	
Planer Mill	Filterable PM	99% reduction as measured by total PM	Fabric Filtration – baghouse and proper maintenance and good operating practices
	Filterable PM_{10}	99% reduction as measured by total PM	
	Filterable $PM_{2.5}$	99% reduction as	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SECTOR POLICIES AND PROGRAMS DIVISION
OFFICE OF AIR QUALITY PLANNING AND STANDARDS
OFFICE OF AIR AND RADIATION

DATE: September 22, 2017

SUBJECT: Development of a Provisional Emissions Calculations Tool for Inclusion in the Final PCWP ICR

FROM: EPA/OAR/OAQPS/SPPD/NRG

TO: EPA-HQ-OAR-2016-0243

I. Introduction

The U.S. EPA is required under Clean Air Act sections 112(f)(2) and 112(d)(6) to perform a residual risk and technology review (RTR) of the Plywood and Composite Wood Products (PCWP) National Emission Standards for Hazardous Air Pollutants (NESHAP) codified in 40 CFR part 63, subpart DDDD. In order to conduct the data analyses required for the RTR, the EPA is conducting an Information Collection Request (ICR) to gather information from the PCWP industry. As part of the ICR, facilities are asked to compile a HAP emissions inventory that will be used in the EPA's residual risk modeling. The EPA will review the file for quality assurance (QA) and standardization. The EPA has included a Provisional Calculation Tool within the PCWP ICR spreadsheet in order to address stakeholder concerns regarding the level of effort (burden) required to develop the HAP emissions inventory as part of the ICR response. Some stakeholders have indicated that many facilities do not maintain HAP emissions inventories, and therefore, considerable effort will be required to develop the inventory required for the ICR. The goal of the developing the provisional calculations is to reduce respondent burden.

Instructions for use of the Provisional Calculation Tool are provided in the ICR instruction document accompanying the draft ICR spreadsheet (PCWP_survey.xlsx). The provisional calculations are built into the *HAP Emissions* tab of the ICR spreadsheet. Because use of the provisional calculations is optional, the columns and instructions pertaining to the Provisional Calculation Tool can be ignored by facilities not using the tool.

The purpose of this memorandum is to document the emission factors used in the Provisional Calculation Tool. Section II provides an overview of the PCWP Source Classification Codes (SCCs) and discusses the selection of emission factors for organic and metal HAP. Appendices to this memorandum list the SCCs and pollutants with emission factors included in the Provisional Calculation Tool.

PCWP	SCC	SCC Level Four	ICR Process Unit Type	Related AP-42 EF to use in absense of more represetnative data	EF source	EF units	Acetaldehyde	Acrolein	Formaldehyde	Methanol	Phenol	Propion aldehyde
plywood	30700784	Press: Non-Urea Formaldehyde Resin: Hardwood	Hardwood plywood press		No EF for SCC							
plywood	30700785	Press: Urea Formaldehyde Resin: Hardwood	Hardwood plywood press	Hardwood Plywood, press, UF resin	AP-42, Ch 10.5	lb/MSF 3/8			0.0047	0.032	0.011	
plywood	30700791	Hammermill/Chipper: Dry Wood Material	Panel trim chipper	SPW dry trim chipper (chips dry trim from SPW panel saws; process rate = finished board production)	AP-42, Ch 10.5	lb/MSF 3/8				0.0078		
plywood	30700794	Miscellaneous Coating Operations	Miscellaneous coating operation		No EF for SCC							
plywood	30700799	Other Not Classified	Other		No EF for SCC							
lumber	30700841	Lumber Kiln: Indirect-heated: Softwood: Pine Species	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.016	0.18	0.01	0.004
lumber	30700842	Lumber Kiln: Indirect-heated: Softwood: Non-Pine Species	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.016	0.18	0.01	0.004
lumber	30700843	Lumber Kiln: Indirect-heated: Hardwood	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.016	0.18	0.01	0.004
lumber	30700844	Lumber Kiln: Direct-fired: Softwood: Pine Species	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.065	0.18	0.01	0.004
lumber	30700845	Lumber Kiln: Direct-fired: Softwood: Non-Pine Species	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.065	0.18	0.01	0.004
lumber	30700846	Lumber Kiln: Direct-fired: Hardwood	Lumber kiln		NCASI 2014	lb/MBF	0.04	0.004	0.065	0.18	0.01	0.004
MDF	30700909	Pressurized Refiner/Primary Tube Dryer: Direct Natural Gas-fired: Blowline Blend: Non-Urea Formaldehyde Resin:	Primary tube dryer	MDF, tube, direct wood-fired, blowline blend, UF, softwood	AP-42, Ch 10.6.3	lb/ODT			0.86			
MDF	30700910	Pressurized Refiner/Primary Tube Dryer: Direct Natural Gas-fired: Blowline Blend: Non-Urea Formaldehyde Resin:	Primary tube dryer	MDF, tube, direct wood-fired, blowline blend, UF, softwood	AP-42, Ch 10.6.3	lb/ODT			0.86			
MDF	30700911	Pressurized Refiner/Primary Tube Dryer: Direct Natural Gas-fired: Blowline Blend: Non-Urea Formaldehyde Resin: Mixed	Primary tube dryer	MDF, tube, direct wood-fired, blowline blend, UF, softwood	AP-42, Ch 10.6.3	lb/ODT			0.86			
MDF	30700912	Pressurized Refiner/Primary Tube Dryer: Direct Natural Gas-fired: Blowline Blend: Urea Formaldehyde Resin:	Primary tube dryer	MDF, tube, direct wood-fired, blowline blend, UF, softwood	AP-42, Ch 10.6.3	lb/ODT			0.86			

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES[a]

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO_x	0.011	1.63	0.031	4.41	D
CO	6.96 E-03[d]	0.99[d]	6.68 E-03	0.95	D
SO_x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10[b]	7.21 E-04	0.10	2.20 E-03	0.31	D
CO_2[c]	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

[a] References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

[b] PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

[c] Assumes 99% conversion of carbon in fuel to CO_2 with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

[d] Instead of 0.439 lb/hp-hr (power output) and 62.7 lb/mmBtu (fuel input), the correct emissions factors values are 6.96 E-03 lb/hp-hr (power output) and 0.99 lb/mmBtu (fuel input), respectively. This is an editorial correction. March 24, 2009

Table 3.3-2. SPECIATED ORGANIC COMPOUND EMISSION FACTORS FOR UNCONTROLLED DIESEL ENGINES[a]

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (Fuel Input) (lb/MMBtu)
Benzene[b]	9.33 E-04
Toluene[b]	4.09 E-04
Xylenes[b]	2.85 E-04
Propylene	2.58 E-03
1,3-Butadiene[b,c]	<3.91 E-05
Formaldehyde[b]	1.18 E-03
Acetaldehyde[b]	7.67 E-04
Acrolein[b]	<9.25 E-05
Polycyclic aromatic hydrocarbons (PAH)	
Naphthalene[b]	8.48 E-05
Acenaphthylene	<5.06 E-06
Acenaphthene	<1.42 E-06
Fluorene	2.92 E-05
Phenanthrene	2.94 E-05
Anthracene	1.87 E-06
Fluoranthene	7.61 E-06
Pyrene	4.78 E-06
Benzo(a)anthracene	1.68 E-06
Chrysene	3.53 E-07
Benzo(b)fluoranthene	<9.91 E-08
Benzo(k)fluoranthene	<1.55 E-07
Benzo(a)pyrene	<1.88 E-07
Indeno(1,2,3-cd)pyrene	<3.75 E-07
Dibenz(a,h)anthracene	<5.83 E-07
Benzo(g,h,l)perylene	<4.89 E-07
TOTAL PAH	1.68 E-04

[a] Based on the uncontrolled levels of 2 diesel engines from References 6-7. Source Classification Codes 2-02-001-02, 2-03-001-01. To convert from lb/MMBtu to ng/J, multiply by 430.
[b] Hazardous air pollutant listed in the *Clean Air Act*.
[c] Based on data from 1 engine.

Table 4 to Subpart IIII of Part 60 - Emission Standards for Stationary Fire Pump Engines

Expand Table

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011 +	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 +[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 +[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010 +[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008 +	6.4 (4.8)		0.20 (0.15)

[1] For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2] For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3] In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Figures (Appendix D)

1:1,300

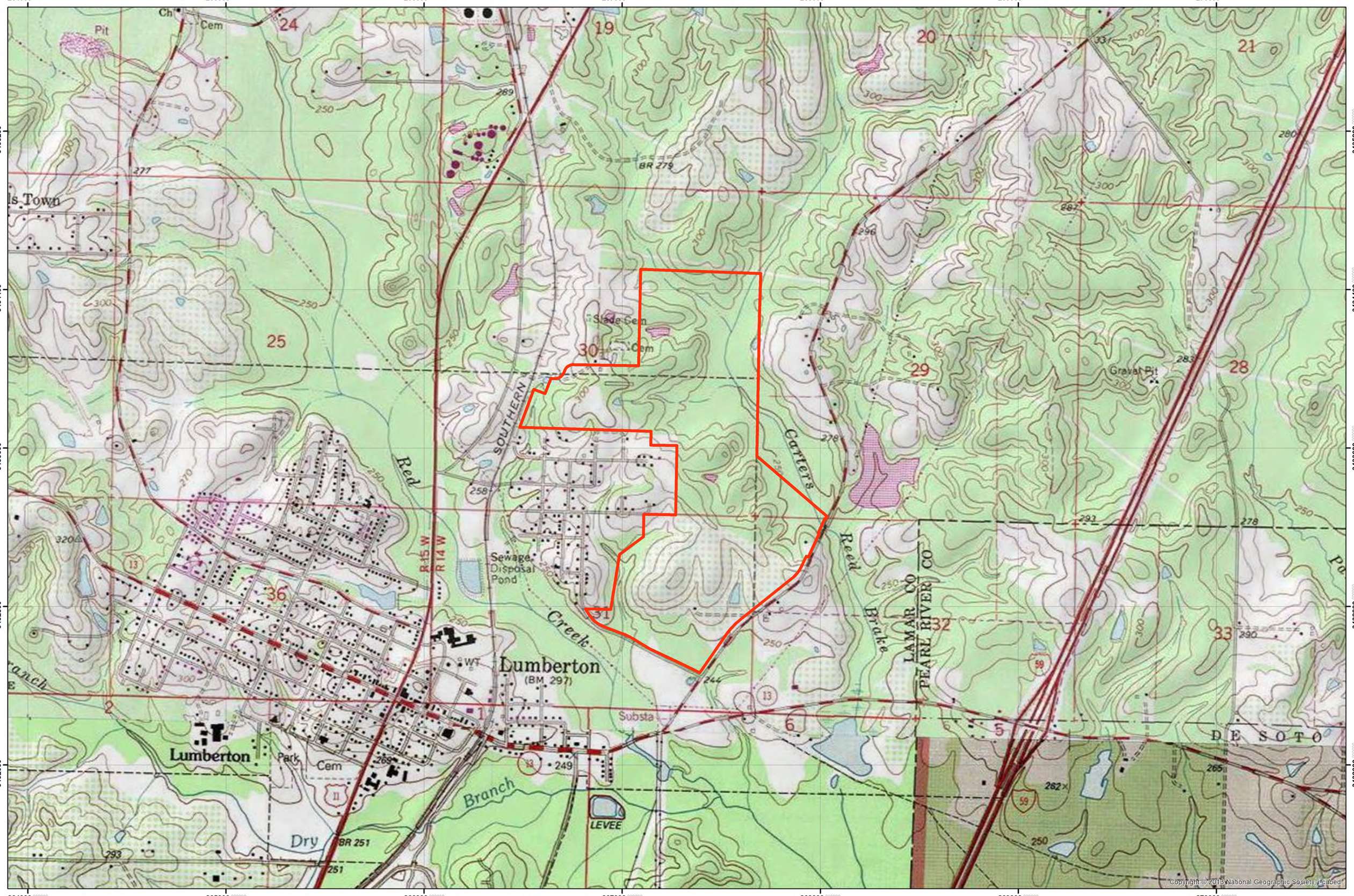
0 0.01 0.02 0.04 0.06 0.08 0.1 Miles

FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Figure 1-1 - Layout Map
Hardy Technologies LLC
Lumberton, Mississippi

N
W E
S

NAD83 UTM Zone 15



1:13,000

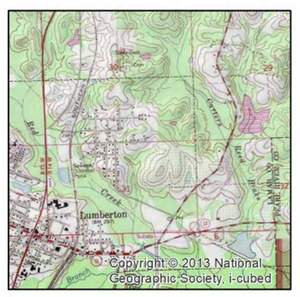
0 0.1 0.2 0.4 0.6 0.8 1 Miles

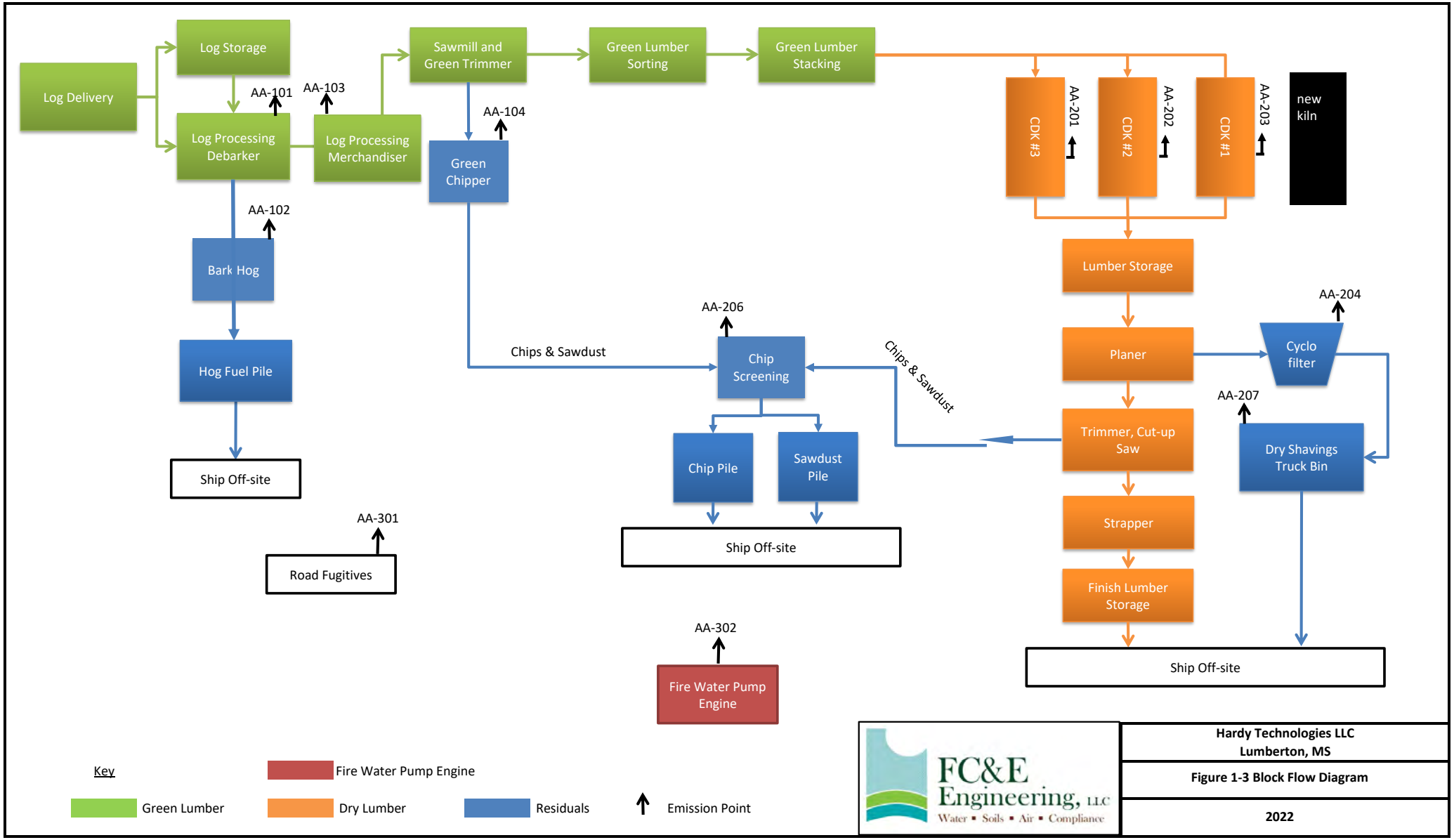
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Figure 1-2 - Topo Map
Hardy Technologies LLC
Lumberton, Mississippi

N
W E
S

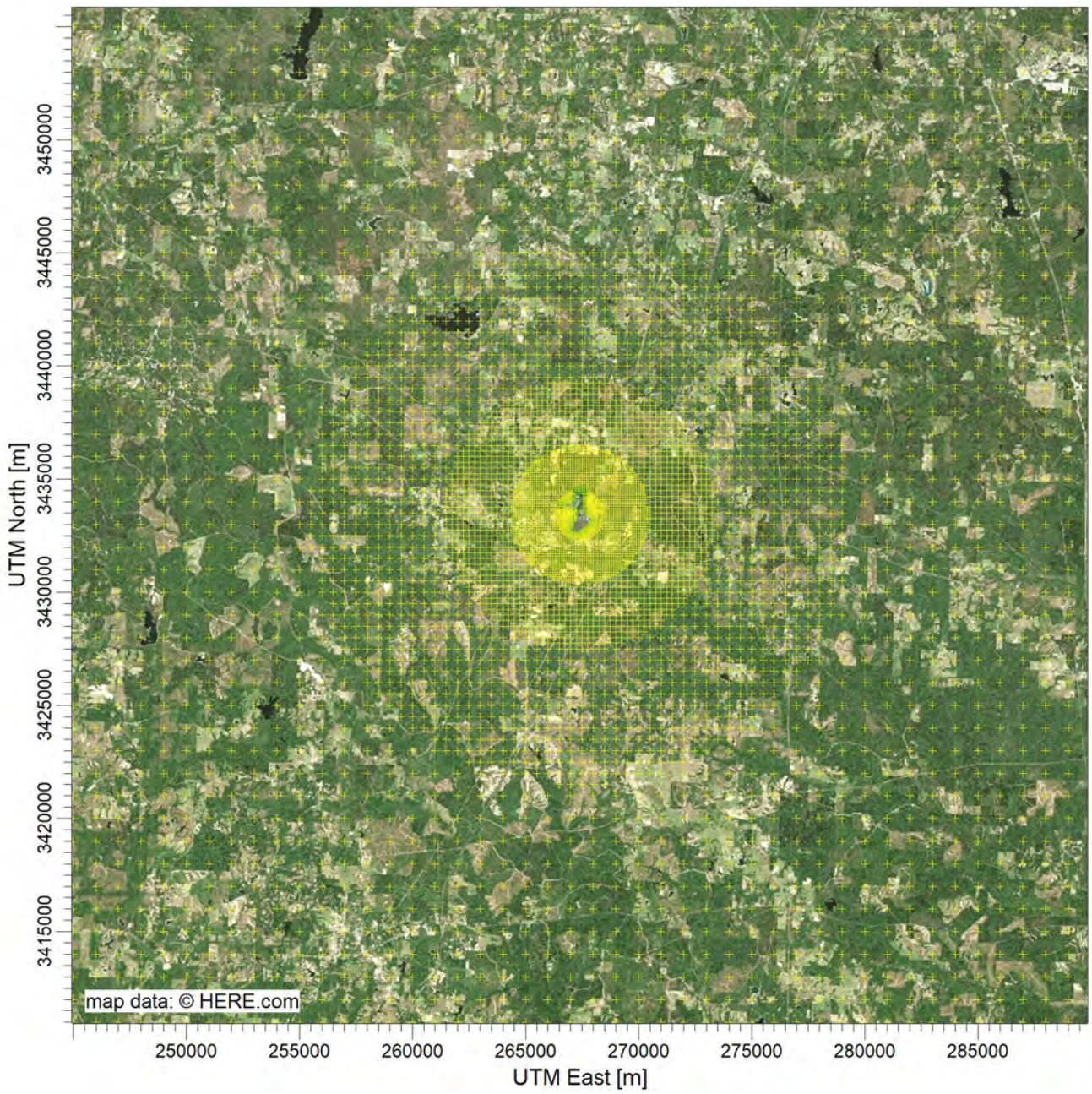
NAD83 UTM Zone 15




Log Delivery
Log Storage
Log Processing Debarker
Log Processing Merchandiser
Sawmill and Green Trimmer
Green Lumber Sorting
Green Lumber Stacking
Green Chipper
Bark Hog
Hog Fuel Pile
Ship Off-site
AA-101
AA-102
AA-103
AA-104
CDK #3
CDK #2
CDK #1
AA-201
AA-202
AA-203
new kiln
Lumber Storage
Planer
Cyclo filter
AA-204
Trimmer, Cut-up Saw
Dry Shavings Truck Bin
AA-207
Strapper
Finish Lumber Storage
Ship Off-site
Chips & Sawdust
AA-206
Chip Screening
Chip Pile
Sawdust Pile
Ship Off-site
Chips & Sawdust
AA-301
Road Fugitives
AA-302
Fire Water Pump Engine
Key
Green Lumber
Fire Water Pump Engine
Dry Lumber
Residuals
Emission Point
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance
Hardy Technologies LLC
Lumberton, MS
Figure 1-3 Block Flow Diagram
2022

PROJECT TITLE:

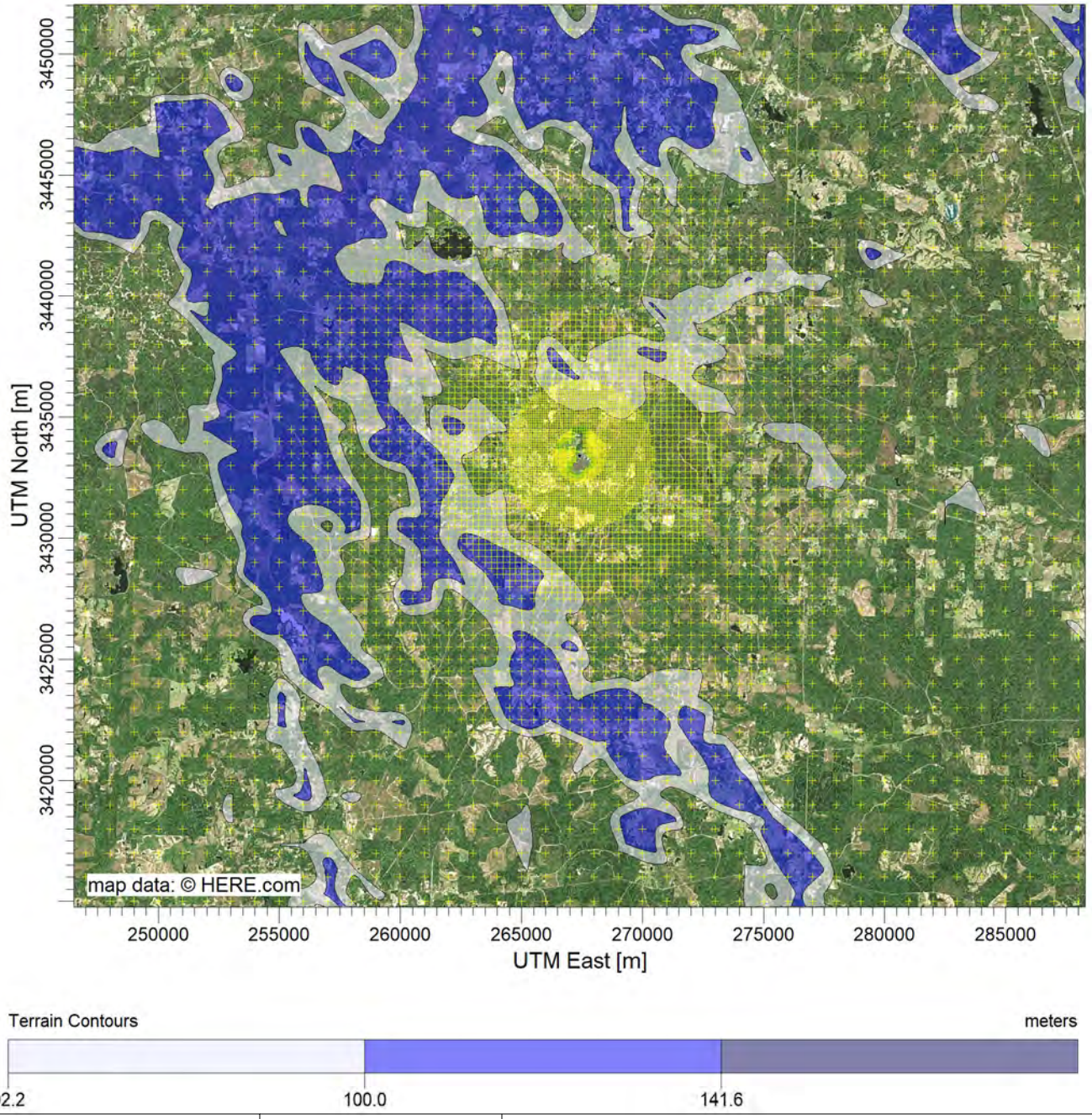
Figure 6-1
Receptor Grid Layout



COMMENTS: Projection: UTM Datum: WGS84 UTM Zone: 16	SOURCES:	COMPANY NAME: **FC&E Engineering, LLC**	
	RECEPTORS: **13522**	MODELER: **Bruce Ferguson**	FC&E Engineering, LLC Water ▪ Soils ▪ Air ▪ Compliance
		SCALE: 1:282,581 0 10 km	
			PROJECT NO.: **Hardy Technologies**

PROJECT TITLE:

Figure 6-2
Surronding Complex Terrain



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	RECEPTORS: **13522**	MODELER: **Bruce Ferguson**	
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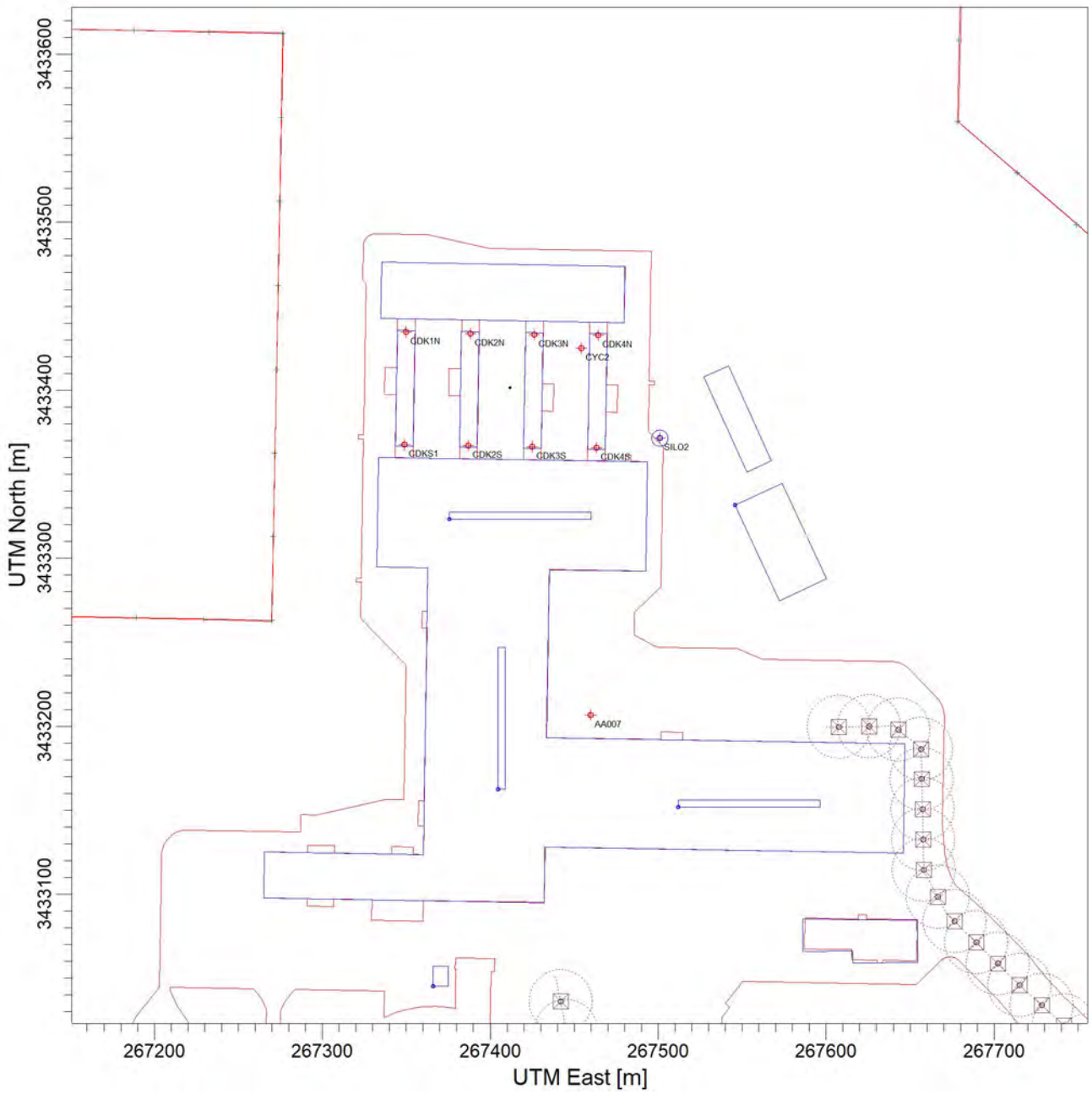
			PROJECT NO.: **Hardy Technologies**

PROJECT TITLE:

Figure 6-3
Building and Point Source Layout



COMMENTS: Projection: UTM Datum: WGS84 UTM Zone: 16	SOURCES: **13**	COMPANY NAME: **FC&E Engineering, LLC**	
	RECEPTORS: **13522**	MODELER: **Bruce Ferguson**	
		SCALE: 1:3,805 0 0.1 km	
			PROJECT NO.: **Hardy Technologies**

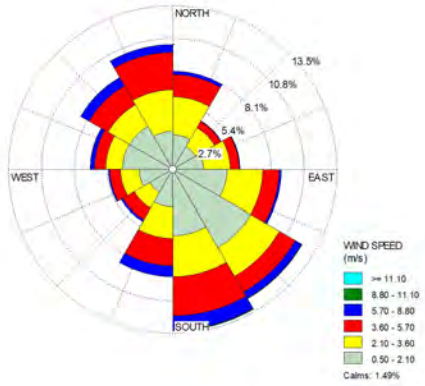
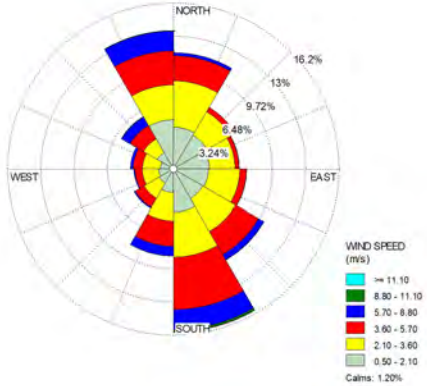
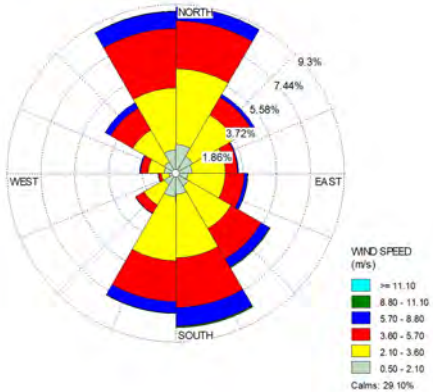
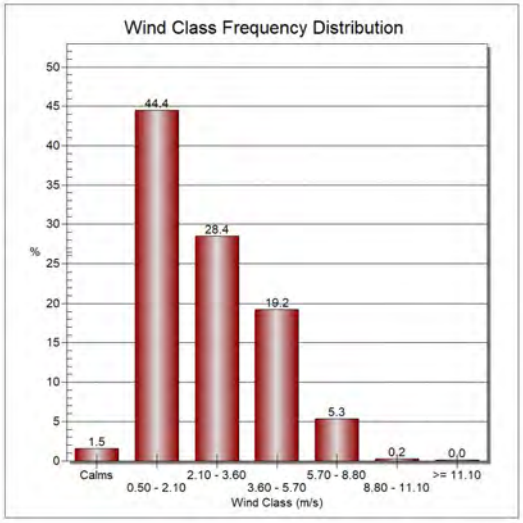
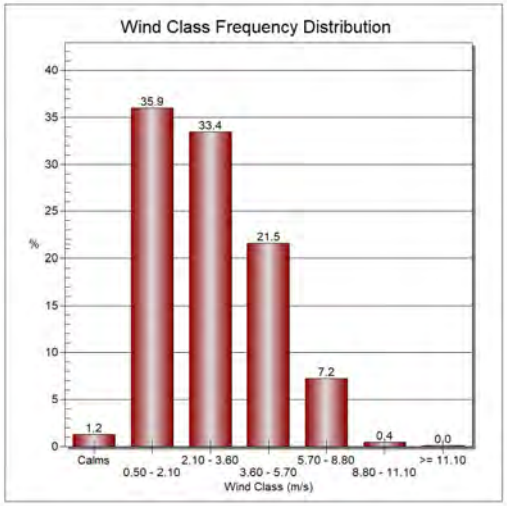
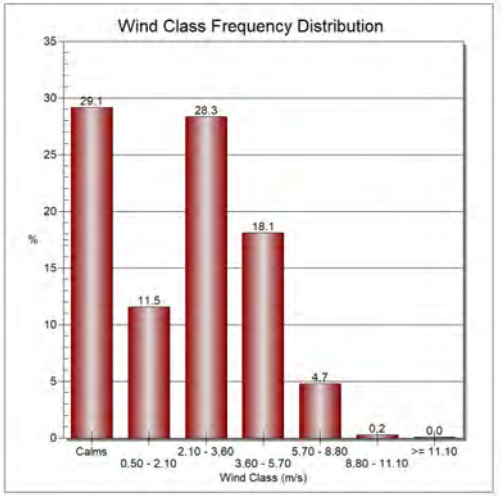
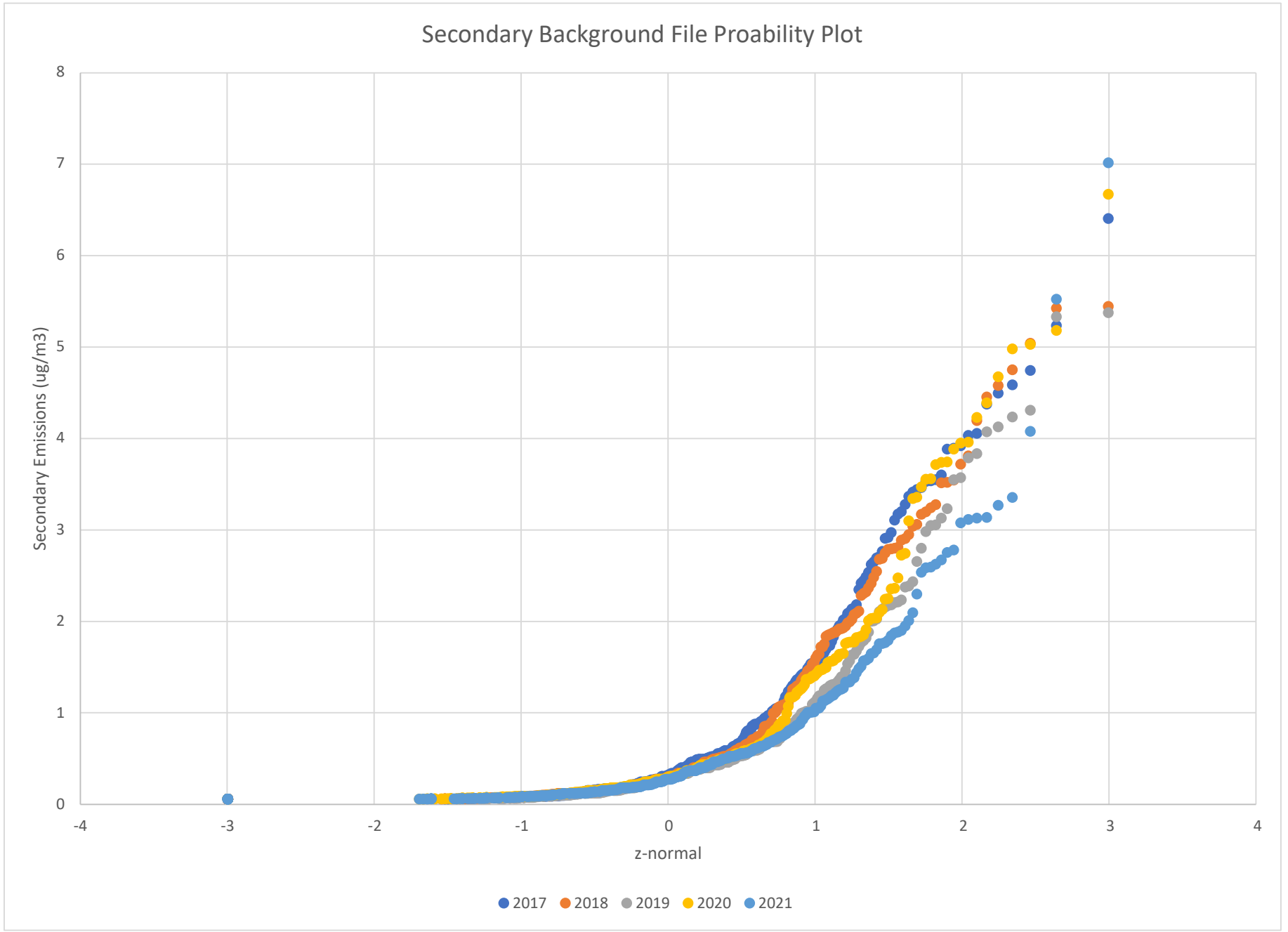
Bobby L Chain Municipal Airport, Hattiesburg, MS	John E Lewis Field Airport, McComb, MS	Hattiesburg Laurel Airport, Hattiesburg, MS
		
		

Figure 6-4 - Wind Rose and Frequency Distribution for NWS stations surrounding project area.


Secondary Background File Proability Plot
Secondary Emissions (ug/m3)
8
7
6
5
4
3
2
1
0
-4
-3
-2
-1
0
1
2
3
4
z-normal
2017
2018
2019
2020
2021

RBLC Report (Appendix E)

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND

RBLC ID:	*AR-0175
+Corporate/Company Name:	
+Facility Name:	GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND
Facility County:	CLARK
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110017425071
Permit Issuance Date:	09/26/2022 ACT

Process Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND

+Process Name:	SN-09 #4 Lumber Kiln
+Process Type:	30.800
Primary Fuel:	natural gas
Throughput:	306.60
Throughput Unit:	MMBTU/hr

Pollutant Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND - SN-09 #4 Lumber Kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/ 1000 BOARD FEET

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL

RBLC ID:	*AR-0174
+Corporate/Company Name:	POTLATCHDELTIC LAND & LUMBER, LLC
+Facility Name:	POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL
Facility County:	BRADLEY
Facility State:	AR
EPA Region:	6
+SIC Code:	2411
Facility Registry System Number:	110000780511
Permit Issuance Date:	08/01/2022 ACT

Process Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL

+Process Name:	Continuous Drying Kilns
+Process Type:	30.800
Primary Fuel:	
Throughput:	400.00
Throughput Unit:	MMBF

Pollutant Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL - Continuous Drying Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: TAYLOR SAWMILL

RBLC ID:	*LA-0387
+Corporate/Company Name:	HUNT FOREST PRODUCTS, LLC
+Facility Name:	TAYLOR SAWMILL
Facility County:	BIENVILLE
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Found

Permit Issuance Date: 04/12/2022 ACT

Process Information: TAYLOR SAWMILL

+Process Name:	Lumber Drying Kilns (K-1, K-2, K-3, K-4)
+Process Type:	30.800
Primary Fuel:	Natural Gas
Throughput:	61.60
Throughput Unit:	M board ft/hr

Pollutant Information: TAYLOR SAWMILL - Lumber Drying Kilns (K-1, K-2, K-3, K-4)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Process Information: TAYLOR SAWMILL

+Process Name:	Firewater Pump Engine (FIR)
+Process Type:	17.210
Primary Fuel:	Diesel
Throughput:	274.00
Throughput Unit:	horsepower

Pollutant Information: TAYLOR SAWMILL - Firewater Pump Engine (FIR)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0200
Emission Limit 1 Unit:	TPY

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: WEYERHAEUSER NR COMPANY, BRUCE FACILITY

RBLC ID:	MS-0094
+Corporate/Company Name:	
+Facility Name:	WEYERHAEUSER NR COMPANY, BRUCE FACILITY
Facility County:	CALHOUN
Facility State:	MS
EPA Region:	4
+SIC Code:	2421

Facility Registry System Number:	Not Found
Permit Issuance Date:	08/17/2021 ACT

Process Information: WEYERHAEUSER NR COMPANY, BRUCE FACILITY

+Process Name:	Lumber Drying Kiln
+Process Type:	30.800
Primary Fuel:	wood
Throughput:	325000.00
Throughput Unit:	MBF/year

Pollutant Information: WEYERHAEUSER NR COMPANY, BRUCE FACILITY - Lumber Drying Kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.5200
Emission Limit 1 Unit:	LB VOC/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: WEST FRASER, INC.

RBLC ID:	AR-0169
+Corporate/Company Name:	WEST FRASER, INC.
+Facility Name:	WEST FRASER, INC.
Facility County:	POPE
Facility State:	AR
EPA Region:	6
+SIC Code:	242
Facility Registry System Number:	Not Found
Permit Issuance Date:	07/30/2021 ACT

Process Information: WEST FRASER, INC.

+Process Name:	Steam-heated kiln
+Process Type:	30.800
Primary Fuel:	natural gas
Throughput:	70000000.00
Throughput Unit:	board-feet

Pollutant Information: WEST FRASER, INC. - Steam-heated kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: VICKSBURG FOREST PRODUCTS, LLC – WALTERSVILLE LUMBER MILL

RBLC ID:	MS-0093
+Corporate/Company Name:	
+Facility Name:	VICKSBURG FOREST PRODUCTS, LLC – WALTERSVILLE LUMBER MILL
Facility County:	WARREN
Facility State:	MS
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	not found
Permit Issuance Date:	10/14/2020 ACT

Process Information: VICKSBURG FOREST PRODUCTS, LLC – WALTERSVILLE LUMBER MILL

+Process Name:	Lumber Drying
+Process Type:	30.800
Primary Fuel:	Steam
Throughput:	164114.00
Throughput Unit:	thousand board-feet per year

Pollutant Information: VICKSBURG FOREST PRODUCTS, LLC – WALTERSVILLE LUMBER MILL - Lumber Drying

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.4300
Emission Limit 1 Unit:	LB/1000 BOARD-FEET

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: LUMBER MANUFACTURING PLANT

RBLC ID:	TX-0870
+Corporate/Company Name:	GEORGIA-PACIFIC WOOD PRODUCTS LLC
+Facility Name:	LUMBER MANUFACTURING PLANT
Facility County:	ANGELINA
Facility State:	TX
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110002346426
Permit Issuance Date:	11/26/2019 ACT

Process Information: LUMBER MANUFACTURING PLANT

+Process Name:	Lumber Kilns
+Process Type:	30.800
Primary Fuel:	
Throughput:	188000.00
Throughput Unit:	NBF/Kiln

Pollutant Information: LUMBER MANUFACTURING PLANT - Lumber Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.4900
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

RBLC ID:	AR-0164
+Corporate/Company Name:	GEORGIA-PACIFIC LLC
+Facility Name:	GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX
Facility County:	CLARK

Facility State:	AR
EPA Region:	6
+SIC Code:	2436
Facility Registry System Number:	110017425071
Permit Issuance Date:	11/22/2019 ACT

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	Log Sawing
+Process Type:	30.390
Primary Fuel:	Logs
Throughput:	2011179.00
Throughput Unit:	tons of logs per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - Log Sawing

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	1.8000
Emission Limit 1 Unit:	LB/H

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	1.1000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	Log Debarking
+Process Type:	30.390
Primary Fuel:	Logs
Throughput:	2011179.00
Throughput Unit:	tons of logs per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - Log Debarking

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	1.0000
Emission Limit 1 Unit:	LB/HR

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	1.0000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	Hammer Hog (Hammer Mill)
+Process Type:	30.390
Primary Fuel:	Bark and Sawdust
Throughput:	2011179.00
Throughput Unit:	tons of logs per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - Hammer Hog (Hammer Mill)

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.1000
Emission Limit 1 Unit:	LB/HR
+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0.1000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	By-Products Transfer Points
+Process Type:	30.390
Primary Fuel:	Logs and Other Wood Products
Throughput:	2011179.00
Throughput Unit:	tons of logs per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - By-Products Transfer Points

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	2.8000
Emission Limit 1 Unit:	LB/HR
+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0.3000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	Plant Haul Roads

+Process Type:	30.390
Primary Fuel:	Logs and Other Wood Products
Throughput:	2011179.00
Throughput Unit:	tons of logs per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - Plant Haul Roads

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	8.5000
Emission Limit 1 Unit:	LB/HR

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	1.7000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	#1 Lumber Kiln and #3 Lumber Kiln
+Process Type:	30.800
Primary Fuel:	Lumber
Throughput:	172000000.00
Throughput Unit:	board feet of lumber per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - #1 Lumber Kiln and #3 Lumber Kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	113.5000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	#4 Lumber Kiln
+Process Type:	30.800
Primary Fuel:	Lumber
Throughput:	130000000.00
Throughput Unit:	board feet of lumber per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - #4 Lumber Kiln

+Pollutant Name	Volatile Organic Compounds (VOC)

Emission Limit 1:	92.0000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	#1 Wood Fuel Fired Boiler
+Process Type:	12.120
Primary Fuel:	Wood fuel
Throughput:	262800.00
Throughput Unit:	tons of wood fuel per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - #1 Wood Fuel Fired Boiler

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	10.0000
Emission Limit 1 Unit:	LB/HR

Process Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX

+Process Name:	#2 Wood Fuel Fired Boiler
+Process Type:	12.120
Primary Fuel:	Wood fuel
Throughput:	262800.00
Throughput Unit:	tons of wood fuel per consecutive 12 month period

Pollutant Information: GP WOOD PRODUCTS SOUTH LLC GURDON PLYWOOD & LUMBER COMPLEX - #2 Wood Fuel Fired Boiler

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	10.0000
Emission Limit 1 Unit:	LB/HR

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: HOLDEN WOOD PRODUCTS MILL

RBLC ID:	LA-0363
+Corporate/Company Name:	WEYERHAEUSER NR COMPANY

+Facility Name:	HOLDEN WOOD PRODUCTS MILL
Facility County:	LIVINGSTON
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	10/02/2019 ACT

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Continuous Lumber Drying Kilns A and B (01-19 and 02-19)
+Process Type:	30.800
Primary Fuel:	Wood residuals
Throughput:	15.97
Throughput Unit:	M board ft/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Continuous Lumber Drying Kilns A and B (01-19 and 02-19)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.3300
Emission Limit 1 Unit:	LB/M BF

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Pneumatic Material Conveying Systems
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Pneumatic Material Conveying Systems

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	CDK Fuel Silo Cyclones A and B (03-19 and 04-19)
+Process Type:	30.999
Primary Fuel:	
Throughput:	27.00

Throughput Unit:	tons/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - CDK Fuel Silo Cyclones A and B (03-19 and 04-19)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	80419.0000
Emission Limit 1 Unit:	T/YR

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Planer Shavings Quad Cyclone (05-19)
+Process Type:	30.999
Primary Fuel:	
Throughput:	10.17
Throughput Unit:	tons/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Planer Shavings Quad Cyclone (05-19)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	10.1700
Emission Limit 1 Unit:	T/HR

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Residual System Quad Cyclone
+Process Type:	30.999
Primary Fuel:	
Throughput:	3.20
Throughput Unit:	tons/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Residual System Quad Cyclone

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.2000
Emission Limit 1 Unit:	T/HR

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Mold Inhibitor Spray Booth (07-19)
+Process Type:	30.999
Primary Fuel:	
Throughput:	180.00
Throughput Unit:	M board ft/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Mold Inhibitor Spray Booth (07-19)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	180.0000
Emission Limit 1 Unit:	M BF/H

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Electric QA Kiln (15-19)
+Process Type:	30.800
Primary Fuel:	
Throughput:	0.04
Throughput Unit:	M board ft/hr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Electric QA Kiln (15-19)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0400
Emission Limit 1 Unit:	M BF/H

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Diesel Storage Tank
+Process Type:	42.009
Primary Fuel:	
Throughput:	150000.00
Throughput Unit:	gallons/yr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Diesel Storage Tank

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	14000.0000
Emission Limit 1 Unit:	GAL

Process Information: HOLDEN WOOD PRODUCTS MILL

+Process Name:	Gasoline Storage Tank
+Process Type:	42.009
Primary Fuel:	
Throughput:	25000.00
Throughput Unit:	gallons/yr

Pollutant Information: HOLDEN WOOD PRODUCTS MILL - Gasoline Storage Tank

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	6000.0000
Emission Limit 1 Unit:	GAL

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: IDABEL SAWMILL

RBLC ID:	OK-0179
+Corporate/Company Name:	WEYERHAEUSER NR CO IDABEL
+Facility Name:	IDABEL SAWMILL
Facility County:	MCCURTAIN
Facility State:	OK
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	NOT FOUND
Permit Issuance Date:	07/24/2019 ACT

Process Information: IDABEL SAWMILL

+Process Name:	LUMBER KILN
+Process Type:	30.800
Primary Fuel:	WOOD WASTE
Throughput:	108.00
Throughput Unit:	MILLION BOARD FT/YR

Pollutant Information: IDABEL SAWMILL - LUMBER KILN

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8800
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: ST. MARIES COMPLEX

RBLC ID:	ID-0022
+Corporate/Company Name:	POTLATCHDELTIC LAND AND LUMBER, LLC
+Facility Name:	ST. MARIES COMPLEX
Facility County:	BENEWAH
Facility State:	ID
EPA Region:	10
+SIC Code:	2421
Facility Registry System Number:	110000468789
Permit Issuance Date:	06/21/2019 ACT

Process Information: ST. MARIES COMPLEX

+Process Name:	Dual track steam-heated batch-type lumber dry kiln
+Process Type:	30.800
Primary Fuel:	N/A
Throughput:	68133.00
Throughput Unit:	mbf/yr

Pollutant Information: ST. MARIES COMPLEX - Dual track steam-heated batch-type lumber dry kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: CANFOR SOUTHERN PINE - CONWAY MILL

RBLC ID:	SC-0192
+Corporate/Company Name:	CANFOR SOUTHERN PINE
+Facility Name:	CANFOR SOUTHERN PINE - CONWAY MILL
Facility County:	HORRY
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000740789

Permit Issuance Date: 05/21/2019 ACT

Process Information: CANFOR SOUTHERN PINE - CONWAY MILL

+Process Name:	Batch Lumber Kilns
+Process Type:	30.800
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: CANFOR SOUTHERN PINE - CONWAY MILL - Batch Lumber Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	MBD-FT

Process Information: CANFOR SOUTHERN PINE - CONWAY MILL

+Process Name:	Boiler No. 2
+Process Type:	13.310
Primary Fuel:	Natural Gas
Throughput:	0
Throughput Unit:	

Pollutant Information: CANFOR SOUTHERN PINE - CONWAY MILL - Boiler No. 2

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.0375
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0054
Emission Limit 1 Unit:	LB/MMBTU

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: BOGALUSA SAWMILL

RBLC ID:	LA-0347
+Corporate/Company Name:	HOOD INDUSTRIES, INC
+Facility Name:	BOGALUSA SAWMILL

Facility County:	WASHING TON
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	04/25/2019 ACT

Process Information: BOGALUSA SAWMILL

+Process Name:	lumber kilns (2)
+Process Type:	30.800
Primary Fuel:	
Throughput:	52.03
Throughput Unit:	mm BF/yr (each)

Pollutant Information: BOGALUSA SAWMILL - lumber kilns (2)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: LUMBER MILL

RBLC ID:	TX-0856
+Corporate/Company Name:	WEST FRASER WOOD PRODUCTS
+Facility Name:	LUMBER MILL
Facility County:	BOWIE
Facility State:	TX
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	03/20/2019 ACT

Process Information: LUMBER MILL

+Process Name:	Direct-Fired Wood Drying Kiln No. 3
+Process Type:	30.800
Primary Fuel:	wood

Throughput:	14.88
Throughput Unit:	MBF

Pollutant Information: LUMBER MILL - Direct-Fired Wood Drying Kiln No. 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2400
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: GEORGIA-PACIFIC WOOD PRODUCTS, LLC - PROSPERITY CHIP-N-SAW

RBLC ID:	SC-0186
+Corporate/Company Name:	GEORGIA-PACIFIC WOOD PRODUCTS, LLC
+Facility Name:	GEORGIA-PACIFIC WOOD PRODUCTS, LLC - PROSPERITY CHIP-N-SAW
Facility County:	NEWBERRY
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	02/21/2019 ACT

Process Information: GEORGIA-PACIFIC WOOD PRODUCTS, LLC - PROSPERITY CHIP-N-SAW

+Process Name:	Lumber Drying Kiln 4
+Process Type:	30.800
Primary Fuel:	Steam
Throughput:	88000.00
Throughput Unit:	1000 bf/yr

Pollutant Information: GEORGIA-PACIFIC WOOD PRODUCTS, LLC - PROSPERITY CHIP-N-SAW - Lumber Drying Kiln 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.7200
Emission Limit 1 Unit:	LB VOC/1000 BD-FT

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL

RBLC ID:	AR-0158
+Corporate/Company Name:	POTLATCHDELTIC LAND & LUMBER, LLC
+Facility Name:	POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL
Facility County:	BRADLEY
Facility State:	AR
EPA Region:	6
+SIC Code:	2411
Facility Registry System Number:	110000780511
Permit Issuance Date:	01/03/2019 ACT

Process Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL

+Process Name:	Continuous Drying Kilns
+Process Type:	30.800
Primary Fuel:	
Throughput:	360.00
Throughput Unit:	MMBF

Pollutant Information: POTLATCHDELTIC LAND AND LUMBER, LLC - WARREN LUMBER MILL - Continuous Drying Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: POTLATCHDELTIC MANUFACTURING L.L.C. -WALDO MILL

RBLC ID:	AR-0157

+Corporate/Company Name:	POTLATCHDELTIC MANUFACTURING L.L.C.
+Facility Name:	POTLATCHDELTIC MANUFACTURING L.L.C. -WALDO MILL
Facility County:	COLUMBIA
Facility State:	AR
EPA Region:	6
+SIC Code:	2411
Facility Registry System Number:	110017420487
Permit Issuance Date:	11/29/2018 ACT

Process Information: POTLATCHDELTIC MANUFACTURING L.L.C. -WALDO MILL

+Process Name:	Continuous Drying Kilns
+Process Type:	30.800
Primary Fuel:	
Throughput:	300.00
Throughput Unit:	MMBF

Pollutant Information: POTLATCHDELTIC MANUFACTURING L.L.C. -WALDO MILL - Continuous Drying Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: JOYCE MILL

RBLC ID:	LA-0335
+Corporate/Company Name:	WEST FRASER TIMBER COMPANY
+Facility Name:	JOYCE MILL
Facility County:	WINN
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110006524939
Permit Issuance Date:	10/04/2018 ACT

Process Information: JOYCE MILL

+Process Name:	EQT003 Kipper Boiler No. 1 (74A)
+Process Type:	13.120
Primary Fuel:	wood residue
Throughput:	58.30
Throughput Unit:	MMBTU/H

Pollutant Information: JOYCE MILL - EQT003 Kipper Boiler No. 1 (74A)

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	105.5300
Emission Limit 1 Unit:	LB/H

Process Information: JOYCE MILL

+Process Name:	EQT0005 McBurney Boiler No. 4 (75A)
+Process Type:	12.120
Primary Fuel:	wood residue
Throughput:	154.20
Throughput Unit:	MMBTU/H

Pollutant Information: JOYCE MILL - EQT0005 McBurney Boiler No. 4 (75A)

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	279.1200
Emission Limit 1 Unit:	LB/H

Process Information: JOYCE MILL

+Process Name:	GRP0003 Lumber kilns (AK1)
+Process Type:	30.800
Primary Fuel:	
Throughput:	300.00
Throughput Unit:	million board feet/yr

Pollutant Information: JOYCE MILL - GRP0003 Lumber kilns (AK1)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	LB/MBF

Previous Page

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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: CANFOR SOUTHERN PINE - CAMDEN PLANT

RBLC ID:	SC-0185
+Corporate/Company Name:	CANFOR SOUTHERN PINE
+Facility Name:	CANFOR SOUTHERN PINE - CAMDEN PLANT
Facility County:	KERSHAW
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000351869
Permit Issuance Date:	09/06/2018 ACT

Process Information: CANFOR SOUTHERN PINE - CAMDEN PLANT

+Process Name:	Lumber Drying Kiln 7
+Process Type:	30.800
Primary Fuel:	Sawdust
Throughput:	110.00
Throughput Unit:	MMbd-ft/yr

Pollutant Information: CANFOR SOUTHERN PINE - CAMDEN PLANT - Lumber Drying Kiln 7

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.8200
Emission Limit 1 Unit:	LB/1000 BD-FT

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: ANTHONY TIMBERLANDS, INC

RBLC ID:	AR-0154
+Corporate/Company Name:	ANTHONY TIMBERLANDS, INC
+Facility Name:	ANTHONY TIMBERLANDS, INC
Facility County:	OUACHITA
Facility State:	AR
EPA Region:	6

+SIC Code:	2411
Facility Registry System Number:	Not Found
Permit Issuance Date:	08/02/2018 ACT

Process Information: ANTHONY TIMBERLANDS, INC

+Process Name:	Continuos Drying Kiln
+Process Type:	30.800
Primary Fuel:	
Throughput:	200.00
Throughput Unit:	MMBF

Pollutant Information: ANTHONY TIMBERLANDS, INC - Continuos Drying Kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	36.8000
Emission Limit 1 Unit:	LB/HR VOC

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: INTERFOR U.S. INC

RBLC ID:	AR-0152
+Corporate/Company Name:	INTERFOR U.S. INC
+Facility Name:	INTERFOR U.S. INC
Facility County:	DREW COUNTY
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110001698921
Permit Issuance Date:	06/29/2018 ACT

Process Information: INTERFOR U.S. INC

+Process Name:	Convert Kiln #2 to continuous operation
+Process Type:	30.800
Primary Fuel:	sawdust
Throughput:	209014.00
Throughput Unit:	MBF/yr

Pollutant Information: INTERFOR U.S. INC - Convert Kiln #2 to continuous operation

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: LUMBER MILL

RBLC ID:	TX-0842
+Corporate/Company Name:	WEST FRASER WOOD PRODUCTS
+Facility Name:	LUMBER MILL
Facility County:	RUSK
Facility State:	TX
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Entered
Permit Issuance Date:	06/15/2018 ACT

Process Information: LUMBER MILL

+Process Name:	Kilns (EPNs CK01 and CK02)
+Process Type:	30.800
Primary Fuel:	
Throughput:	25.00
Throughput Unit:	MBF/KILN

Pollutant Information: LUMBER MILL - Kilns (EPNs CK01 and CK02)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.3800
Emission Limit 1 Unit:	LB / DBF

Process Information: LUMBER MILL

+Process Name:	Thermal Oil Heating System (TOHS) (EPN HTR1)
+Process Type:	12.120
Primary Fuel:	BIOMASS
Throughput:	149.25

Throughput Unit:	MMBTU / HR

Pollutant Information: LUMBER MILL - Thermal Oil Heating System (TOHS) (EPN HTR1)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0280
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.5050
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Carbon Dioxide Equivalent (CO2e)
Emission Limit 1:	206.8000
Emission Limit 1 Unit:	LB/MMBTU

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: URANIA SAWMILL

RBLC ID:	LA-0338
+Corporate/Company Name:	HUNT FOREST PRODUCTS, LLC
+Facility Name:	URANIA SAWMILL
Facility County:	LASALLE
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	not found
Permit Issuance Date:	05/08/2018 ACT

Process Information: URANIA SAWMILL

+Process Name:	Lumber Drying Kilns (K-1, K-2, K3)
+Process Type:	30.800
Primary Fuel:	Steam
Throughput:	45.00
Throughput Unit:	MMBTU/hr

Pollutant Information: URANIA SAWMILL - Lumber Drying Kilns (K-1, K-2, K3)

+Pollutant Name	Volatile Organic Compounds (VOC)

Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: NSLC - DARLINGTON

RBLC ID:	SC-0184
+Corporate/Company Name:	NEW SOUTH LUMBER COMPANY
+Facility Name:	NSLC - DARLINGTON
Facility County:	DARLINGTON
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110007026903
Permit Issuance Date:	02/06/2018 ACT

Process Information: NSLC - DARLINGTON

+Process Name:	Lumber Drying Kiln 7
+Process Type:	30.800
Primary Fuel:	Natural Gas
Throughput:	80.00
Throughput Unit:	MMbd-ft/yr

Pollutant Information: NSLC - DARLINGTON - Lumber Drying Kiln 7

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	LB VOC/1000 BD-FT

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: CADDO RIVER LLC

RBLC ID:	AR-0148

+Corporate/Company Name:	CADDO RIVER LLC
+Facility Name:	CADDO RIVER LLC
Facility County:	PIKE
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110000597774
Permit Issuance Date:	01/29/2018 ACT

Process Information: CADDO RIVER LLC

+Process Name:	Dual Path Kiln # 3
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	185000.00
Throughput Unit:	MBF

Pollutant Information: CADDO RIVER LLC - Dual Path Kiln # 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Process Information: CADDO RIVER LLC

+Process Name:	DPK # 3 Abort Stack
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	2000.00
Throughput Unit:	lb

Pollutant Information: CADDO RIVER LLC - DPK # 3 Abort Stack

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0170
Emission Limit 1 Unit:	LB/MMBTU

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: TALLADEGA SAWMILL

RBLC ID:	*AL-0318
+Corporate/Company Name:	GEORGIA PACIFIC WOOD PRODUCTS, LLC
+Facility Name:	TALLADEGA SAWMILL
Facility County:	TALLADEGA COUNTY
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	12/18/2017 ACT

Process Information: TALLADEGA SAWMILL

+Process Name:	Sawmill and Green End Operations
+Process Type:	30.999
Primary Fuel:	N/A
Throughput:	656000.00
Throughput Unit:	lb/hr

Pollutant Information: TALLADEGA SAWMILL - Sawmill and Green End Operations

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: TALLADEGA SAWMILL

+Process Name:	Dry Kiln 1
+Process Type:	30.800
Primary Fuel:	natural gas
Throughput:	343530.00
Throughput Unit:	MCF/hr

Pollutant Information: TALLADEGA SAWMILL - Dry Kiln 1

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.3300
Emission Limit 1 Unit:	LB/HR
+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.4900
Emission Limit 1 Unit:	LB/MBF AS WPP1 VOC
+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Sulfur Oxides (SOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Methanol
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Phenol
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Formaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Acetaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Acrolein

Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: TALLADEGA SAWMILL

+Process Name:	Dry Kiln 2
+Process Type:	30.800
Primary Fuel:	Natural Gas
Throughput:	343530.00
Throughput Unit:	MCF/hr

Pollutant Information: TALLADEGA SAWMILL - Dry Kiln 2

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.3300
Emission Limit 1 Unit:	LB/HR
+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.4900
Emission Limit 1 Unit:	LB/MBF AS WPP1 VOC
+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Sulfur Oxides (SOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Methanol
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Phenol
Emission Limit 1:	0

Emission Limit 1 Unit:

+Pollutant Name Formaldehyde
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name Acetaldehyde
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name Acrolein
Emission Limit 1: 0
Emission Limit 1 Unit:

Process Information: TALLADEGA SAWMILL

+Process Name: Dry Kiln 3
+Process Type: 30.800
Primary Fuel: Natural Gas
Throughput: 257648.00
Throughput Unit: MCF/hr

Pollutant Information: TALLADEGA SAWMILL - Dry Kiln 3

+Pollutant Name Particulate matter, total (TPM)
Emission Limit 1: 0.2300
Emission Limit 1 Unit: LB/HR

+Pollutant Name Particulate matter, total < 10 μ (TPM10)
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name Volatile Organic Compounds (VOC)
Emission Limit 1: 5.4900
Emission Limit 1 Unit: LB/MBF AS WPP1 VOC

+Pollutant Name Carbon Monoxide
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name Nitrogen Oxides (NOx)
Emission Limit 1: 0
Emission Limit 1 Unit:

+Pollutant Name	Sulfur Oxides (SOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Methanol
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Phenol
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Formaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Acetaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Acrolein
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: TALLADEGA SAWMILL

+Process Name:	Planer Mill and Finished End Operations
+Process Type:	30.999
Primary Fuel:	N/A
Throughput:	320.00
Throughput Unit:	MMBf/yr

Pollutant Information: TALLADEGA SAWMILL - Planer Mill and Finished End Operations

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+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.3700
Emission Limit 1 Unit:	LB/HR

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: TALLADEGA SAWMILL

+Process Name:	250 Hp Emergency CI, Diesel-fired RICE
+Process Type:	17.110
Primary Fuel:	Diesel
Throughput:	0
Throughput Unit:	

Pollutant Information: TALLADEGA SAWMILL - 250 Hp Emergency CI, Diesel-fired RICE

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Sulfur Oxides (SOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Formaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Acetaldehyde
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

RBLC ID:	SC-0181
+Corporate/Company Name:	RESOLUTE FP US INC.
+Facility Name:	RESOLUTE FP US INC. - CATAWBA LUMBER MILL
Facility County:	YORK
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000355035
Permit Issuance Date:	11/03/2017 ACT

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	3 Continuous Direct-Fired Lumber Kilns, CDK1, CDK2, CDK3
+Process Type:	30.800
Primary Fuel:	green sawdust
Throughput:	104.17
Throughput Unit:	MM BF/YR

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - 3 Continuous Direct-Fired Lumber Kilns, CDK1, CDK2, CDK3

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.1400
Emission Limit 1 Unit:	LB/M BF

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0.1040
Emission Limit 1 Unit:	LB/ M BF

+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0.0990
Emission Limit 1 Unit:	LB/ M BF

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.8200
Emission Limit 1 Unit:	LB/M BF

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.7300
Emission Limit 1 Unit:	LB/M BF

+Pollutant Name	Carbon Dioxide
Emission Limit 1:	206.7900
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Methane
Emission Limit 1:	0.0159
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Nitrous Oxide (N2O)
Emission Limit 1:	0.0079
Emission Limit 1 Unit:	LB/MMBTU

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Debarking
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Debarking

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+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0010
Emission Limit 1 Unit:	LB/TON

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0004
Emission Limit 1 Unit:	LB/TON

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0002
Emission Limit 1 Unit:	LB/TON

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Log Sawing
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Log Sawing

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0010
Emission Limit 1 Unit:	LB/TON
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0004
Emission Limit 1 Unit:	LB/TON
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0002
Emission Limit 1 Unit:	LB/TON

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	3 Kiln Fuel Silos, KFS-1, KFS-2, KFS-3
+Process Type:	99.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - 3 Kiln Fuel Silos, KFS-1, KFS-2, KFS-3

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0100
Emission Limit 1 Unit:	GR/DSCF
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0035
Emission Limit 1 Unit:	GR/DSCF
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0011
Emission Limit 1 Unit:	GR/DSCF

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Dry Shavings Storage Silo
+Process Type:	99.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Dry Shavings Storage Silo

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	GR/DSCF
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0007
Emission Limit 1 Unit:	LB/DSCF
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0002
Emission Limit 1 Unit:	GR/DSCF

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Planer Mill
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Planer Mill

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Material Transfer
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Material Transfer

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0012
Emission Limit 1 Unit:	LB/TON
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0005
Emission Limit 1 Unit:	LB/TON
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0001
Emission Limit 1 Unit:	LB/TON

Process Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL

+Process Name:	Roads
+Process Type:	99.140
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: RESOLUTE FP US INC. - CATAWBA LUMBER MILL - Roads

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.1300
Emission Limit 1 Unit:	LB/VMT
+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0300
Emission Limit 1 Unit:	LB/VMT
+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0100
Emission Limit 1 Unit:	LB/VMT

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: ANTHONY FOREST PRODUCTS COMPANY, LLC

RBLC ID:	AR-0147
+Corporate/Company Name:	ANTHONY FOREST PRODUCTS COMPANY, LLC

+Facility Name:	ANTHONY FOREST PRODUCTS COMPANY, LLC
Facility County:	UNION COUNTY
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110001702346
Permit Issuance Date:	10/02/2017 ACT

Process Information: ANTHONY FOREST PRODUCTS COMPANY, LLC

+Process Name:	Dual Path Kiln #3
+Process Type:	30.800
Primary Fuel:	sawdust
Throughput:	31.50
Throughput Unit:	MMBtu/hr

Pollutant Information: ANTHONY FOREST PRODUCTS COMPANY, LLC - Dual Path Kiln #3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: WEST FRASER, INC.

RBLC ID:	AR-0146
+Corporate/Company Name:	WEST FRASER, INC.
+Facility Name:	WEST FRASER, INC.
Facility County:	POPE
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110010064955
Permit Issuance Date:	09/14/2017 ACT

Process Information: WEST FRASER, INC.

+Process Name:	22
+Process Type:	30.800

Primary Fuel:	wood
Throughput:	0
Throughput Unit:	

Pollutant Information: WEST FRASER, INC. - 22

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MMBOARD FEET

Process Information: WEST FRASER, INC.

+Process Name:	SN-22gx START UP ABORT STACK
+Process Type:	30.800
Primary Fuel:	WOOD
Throughput:	30.00
Throughput Unit:	MMBTU/HR

Pollutant Information: WEST FRASER, INC. - SN-22gx START UP ABORT STACK

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0170
Emission Limit 1 Unit:	LB/MMBTU

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: FULTON SAWMILL

RBLC ID:	AL-0310
+Corporate/Company Name:	SCOTCH GULF LUMBER, LLC
+Facility Name:	FULTON SAWMILL
Facility County:	CLARKE
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	06/08/2017 ACT

Process Information: FULTON SAWMILL

+Process Name:	11.4 MBF/HR CONTINUOUS DIRECT-FIRED LUMBER DRY KILN, 40 MMBTU/HR NATURAL GAS BURNER, & 4 MMBTU/HR NATURAL GAS CONDENSATE EVAPORATOR
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	11.40
Throughput Unit:	MBF/H

Pollutant Information: FULTON SAWMILL - 11.4 MBF/HR CONTINUOUS DIRECT-FIRED LUMBER DRY KILN, 40 MMBTU/HR NATURAL GAS BURNER, & 4 MMBTU/HR NATURAL GAS CONDENSATE EVAPORATOR

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Sulfur Dioxide (SO2)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.0000
Emission Limit 1 Unit:	LB/MBF

Process Information: FULTON SAWMILL

+Process Name:	PLANER MILL WITH PNEUMATIC CONVEYANCE SYSTEM AND CYCLONE
+Process Type:	30.999
Primary Fuel:	DRY LUMBER
Throughput:	240.00
Throughput Unit:	MMBF/YR

Pollutant Information: FULTON SAWMILL - PLANER MILL WITH PNEUMATIC CONVEYANCE SYSTEM AND CYCLONE

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	3.0000

Emission Limit 1 Unit:	LB/H

+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	2.0000
Emission Limit 1 Unit:	LB/H

+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	1.8000
Emission Limit 1 Unit:	LB/H

Previous Page

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Facility Information: PERRY MILL

RBLC ID:	FL-0365
+Corporate/Company Name:	GILMAN BUILDING PRODUCTS, LLC
+Facility Name:	PERRY MILL
Facility County:	TAYLOR
Facility State:	FL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110070147052
Permit Issuance Date:	04/11/2017 ACT

Process Information: PERRY MILL

+Process Name:	Direct-Fired Batch Lumber Drying Kiln No. 5
+Process Type:	30.800
Primary Fuel:	Waste wood
Throughput:	50000.00
Throughput Unit:	MMBF per year

Pollutant Information: PERRY MILL - Direct-Fired Batch Lumber Drying Kiln No. 5

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

Previous Page

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Facility Information: CADDO RIVER LLC

RBLC ID:	AR-0143
+Corporate/Company Name:	CADDO RIVER LLC
+Facility Name:	CADDO RIVER LLC
Facility County:	PIKE
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110067041766
Permit Issuance Date:	02/08/2017 ACT

Process Information: CADDO RIVER LLC

+Process Name:	CONTINUOUS LUMBER DRYING KILNS
+Process Type:	30.800
Primary Fuel:	WOOD
Throughput:	116000000.00
Throughput Unit:	BOARD FEET

Pollutant Information: CADDO RIVER LLC - CONTINUOUS LUMBER DRYING KILNS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	53.2000
Emission Limit 1 Unit:	LB/H

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: TWO RIVERS LUMBER CO., LLC

RBLC ID:	AL-0308
+Corporate/Company Name:	TWO RIVERS LUMBER CO., LLC
+Facility Name:	TWO RIVERS LUMBER CO., LLC
Facility County:	MARENGO
Facility State:	AL
EPA Region:	4
+SIC Code:	2421

Facility Registry System Number:	Not Found
Permit Issuance Date:	01/03/2017 ACT

Process Information: TWO RIVERS LUMBER CO., LLC

+Process Name:	15.4 MBF/HR CDK (DPK-1) W/ 38.8 MMBTU/HR NATURAL GAS BURNER
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	15.40
Throughput Unit:	MBF/H

Pollutant Information: TWO RIVERS LUMBER CO., LLC - 15.4 MBF/HR CDK (DPK-1) W/ 38.8 MMBTU/HR NATURAL GAS BURNER

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	1.3000
Emission Limit 1 Unit:	LB
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Process Information: TWO RIVERS LUMBER CO., LLC

+Process Name:	15.4 MBF/HR CDK (DPK-2) W/ 38.8 MMBTU/HR NATURAL GAS BURNER
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	15.40
Throughput Unit:	MBF/H

Pollutant Information: TWO RIVERS LUMBER CO., LLC - 15.4 MBF/HR CDK (DPK-2) W/ 38.8 MMBTU/HR NATURAL GAS BURNER

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	1.3000
Emission Limit 1 Unit:	LB
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

Process Information: TWO RIVERS LUMBER CO., LLC

+Process Name:	SAWMILL
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: TWO RIVERS LUMBER CO., LLC - SAWMILL

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0
Emission Limit 1 Unit:	

Process Information: TWO RIVERS LUMBER CO., LLC

+Process Name:	PLANER MILL
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: TWO RIVERS LUMBER CO., LLC - PLANER MILL

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0480
Emission Limit 1 Unit:	LB

+Pollutant Name	Particulate matter, total < 10 μ (TPM10)
Emission Limit 1:	0
Emission Limit 1 Unit:	

+Pollutant Name	Particulate matter, total < 2.5 μ (TPM2.5)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

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Facility Information: GEORGIA PACIFIC - MCCORMICK SAWMILL

RBLC ID:	SC-0176

+Corporate/Company Name:	GEORGIA PACIFIC WOOD PRODUCTS LLC
+Facility Name:	GEORGIA PACIFIC - MCCORMICK SAWMILL
Facility County:	MCCORMICK
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	10/27/2016 ACT

Process Information: GEORGIA PACIFIC - MCCORMICK SAWMILL

+Process Name:	Direct fired continuous lumber kiln
+Process Type:	30.800
Primary Fuel:	Wood Fired
Throughput:	26.00
Throughput Unit:	MMBTU/HR

Pollutant Information: GEORGIA PACIFIC - MCCORMICK SAWMILL - Direct fired continuous lumber kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

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Facility Information: MILLPORT WOOD PRODUCTS FACILITY

RBLC ID:	AL-0311
+Corporate/Company Name:	WEYERHAEUSER NR COMPANY
+Facility Name:	MILLPORT WOOD PRODUCTS FACILITY
Facility County:	LAMAR
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	08/30/2016 ACT

Process Information: MILLPORT WOOD PRODUCTS FACILITY

+Process Name:	THREE CONTINUOUS DIRECT-FIRED LUMBER DRY KILNS, CDK-4/X023A, CDK-5/X023B, CDK-6/X023C
+Process Type:	30.800
Primary Fuel:	WOOD-SAWDUST
Throughput:	385.00
Throughput Unit:	MMBF/YR

Pollutant Information: MILLPORT WOOD PRODUCTS FACILITY - THREE CONTINUOUS DIRECT-FIRED LUMBER DRY KILNS, CDK-4/X023A, CDK-5/X023B, CDK-6/X023C

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.7000
Emission Limit 1 Unit:	LB/MBF AS WPP1

Previous Page

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Facility Information: GRACEVILLE LUMBER MILL

RBLC ID:	FL-0358
+Corporate/Company Name:	REX LUMBER, LLC
+Facility Name:	GRACEVILLE LUMBER MILL
Facility County:	JACKSON
Facility State:	FL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	07/14/2016 ACT

Process Information: GRACEVILLE LUMBER MILL

+Process Name:	Direct-fired continuous lumber drying Kiln No. 5
+Process Type:	30.800
Primary Fuel:	Sawdust
Throughput:	110000.00
Throughput Unit:	Thousand bf/yr

Pollutant Information: GRACEVILLE LUMBER MILL - Direct-fired continuous lumber drying Kiln No. 5

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/THOUSAND BF

Previous Page

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Facility Information: BELK CHIP-N-SAW FACILITY

RBLC ID:	AL-0312
+Corporate/Company Name:	GEORGIA-PACIFIC WOOD PRODUCTS LLC
+Facility Name:	BELK CHIP-N-SAW FACILITY
Facility County:	FAYETTE
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	05/26/2016 ACT

Process Information: BELK CHIP-N-SAW FACILITY

+Process Name:	115,000 MBF/YR CDK D (ES-006) WITH 35 MMBTU/HR WOOD-FIRED AND 7 MMBTU/HR NG-FIRED BURNERS
+Process Type:	30.800
Primary Fuel:	WOOD-SAWDUST
Throughput:	115.00
Throughput Unit:	MMBF/YR

Pollutant Information: BELK CHIP-N-SAW FACILITY - 115,000 MBF/YR CDK D (ES-006) WITH 35 MMBTU/HR WOOD-FIRED AND 7 MMBTU/HR NG-FIRED BURNERS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.4900
Emission Limit 1 Unit:	LB/MBF AS WPPI VOC

Process Information: BELK CHIP-N-SAW FACILITY

+Process Name:	60 MMBTU/HR NATURAL GAS-FIRED BOILER (ES-008)

+Process Type:	13.310
Primary Fuel:	NATURAL GAS
Throughput:	60.00
Throughput Unit:	MMBTU/H

Pollutant Information: BELK CHIP-N-SAW FACILITY - 60 MMBTU/HR NATURAL GAS-FIRED BOILER (ES-008)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0054
Emission Limit 1 Unit:	LB/MMBTU INPUT

Process Information: BELK CHIP-N-SAW FACILITY

+Process Name:	115,000 MBF/YR CDK E (ES-009) WITH 35 MMBTU/HR WOOD-FIRED AND 7 MMBTU/HR NG-FIRED BURNERS
+Process Type:	30.800
Primary Fuel:	WOOD-SAWDUST
Throughput:	115.00
Throughput Unit:	MMBF/YR

Pollutant Information: BELK CHIP-N-SAW FACILITY - 115,000 MBF/YR CDK E (ES-009) WITH 35 MMBTU/HR WOOD-FIRED AND 7 MMBTU/HR NG-FIRED BURNERS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	5.4900
Emission Limit 1 Unit:	LB/MBF AS WPP1 VOC

Previous Page

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Facility Information: NEW SOUTH LUMBER COMPANY - DARLINGTON INC.

RBLC ID:	SC-0166
+Corporate/Company Name:	NEW SOUTH LUMBER COMPANY - DARLINGTON INC.
+Facility Name:	NEW SOUTH LUMBER COMPANY - DARLINGTON INC.
Facility County:	DARLINGTON
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110061778214
Permit Issuance Date:	01/26/2016 ACT

Process Information: NEW SOUTH LUMBER COMPANY - DARLINGTON INC.

+Process Name:	TWO KILNS - KLN5 AND KLN6
+Process Type:	30.800
Primary Fuel:	GREEN SAWDUST
Throughput:	85.00
Throughput Unit:	MILLION BD-FT/YR

Pollutant Information: NEW SOUTH LUMBER COMPANY - DARLINGTON INC. - TWO KILNS - KLN5 AND KLN6

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0
Emission Limit 1 Unit:	

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: DELTIC TIMBER CORPORATION - OLA

RBLC ID:	AR-0127
+Corporate/Company Name:	DELTIC TIMBER CORPORATION
+Facility Name:	DELTIC TIMBER CORPORATION - OLA
Facility County:	YELL
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110020056776
Permit Issuance Date:	10/13/2015 ACT

Process Information: DELTIC TIMBER CORPORATION - OLA

+Process Name:	STEAM HEATED CONTINUOUS KILN NO. 3
+Process Type:	30.800
Primary Fuel:	
Throughput:	79000.00
Throughput Unit:	MBF/YR

Pollutant Information: DELTIC TIMBER CORPORATION - OLA - STEAM HEATED CONTINUOUS KILN NO. 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	33.3000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION - OLA

+Process Name:	STEAM HEATED CONTINUOUS KILN NO. 4
+Process Type:	30.800
Primary Fuel:	
Throughput:	79000.00
Throughput Unit:	MBF/YR

Pollutant Information: DELTIC TIMBER CORPORATION - OLA - STEAM HEATED CONTINUOUS KILN NO. 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	33.3000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION - OLA

+Process Name:	DIRECT-FIRED CONTINUOUS KILN NO. 5
+Process Type:	30.800
Primary Fuel:	
Throughput:	79000.00
Throughput Unit:	MBF/YR

Pollutant Information: DELTIC TIMBER CORPORATION - OLA - DIRECT-FIRED CONTINUOUS KILN NO. 5

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	38.2000
Emission Limit 1 Unit:	LB/H

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: COTTONTON SAWMILL

RBLC ID:	AL-0322

+Corporate/Company Name:	WESTROCK COATED BOARD, LLC
+Facility Name:	COTTONTON SAWMILL
Facility County:	RUSSELL
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110010380097
Permit Issuance Date:	08/05/2015 ACT

Process Information: COTTONTON SAWMILL

+Process Name:	Continuous Direct-fired Lumber Dry Kiln with 34 MMBtu/hr Wood-fired burner
+Process Type:	30.800
Primary Fuel:	Biomass
Throughput:	16.40
Throughput Unit:	MBF/hr

Pollutant Information: COTTONTON SAWMILL - Continuous Direct-fired Lumber Dry Kiln with 34 MMBtu/hr Wood-fired burner

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2100
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: EL DORADO SAWMILL

RBLC ID:	AR-0124
+Corporate/Company Name:	UNION COUNTY LUMBER COMPANY
+Facility Name:	EL DORADO SAWMILL
Facility County:	UNION
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110006786497
Permit Issuance Date:	08/03/2015 ACT

Process Information: EL DORADO SAWMILL

+Process Name:	LUMBER DRYING KILN SN-01
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	45.00
Throughput Unit:	MMBTU/H

Pollutant Information: EL DORADO SAWMILL - LUMBER DRYING KILN SN-01

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF
+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0220
Emission Limit 1 Unit:	LB/MBF

Process Information: EL DORADO SAWMILL

+Process Name:	LUMBER DRYING KILN SN-02
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	45.00
Throughput Unit:	MMBTU/H

Pollutant Information: EL DORADO SAWMILL - LUMBER DRYING KILN SN-02

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF
+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0220
Emission Limit 1 Unit:	LB/MBF

Process Information: EL DORADO SAWMILL

+Process Name:	LUMBER DRYING KILN SN-03
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	45.00
Throughput Unit:	MMBTU/H

Pollutant Information: EL DORADO SAWMILL - LUMBER DRYING KILN SN-03

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/MBF

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0220
Emission Limit 1 Unit:	LB/MBF

Process Information: EL DORADO SAWMILL

+Process Name:	ELEVEN OIL STORAGE TANKS SN-14
+Process Type:	42.009
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - ELEVEN OIL STORAGE TANKS SN-14

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.3000
Emission Limit 1 Unit:	LB/H

Process Information: EL DORADO SAWMILL

+Process Name:	THREE DIESEL STORAGE TANKS SN-15
+Process Type:	42.009
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - THREE DIESEL STORAGE TANKS SN-15

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.4000
Emission Limit 1 Unit:	LB/H

Process Information: EL DORADO SAWMILL

+Process Name:	ONE GASOLINE STORAGE TANK SN-16
+Process Type:	42.009
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - ONE GASOLINE STORAGE TANK SN-16

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0220
Emission Limit 1 Unit:	LB/MBF

Process Information: EL DORADO SAWMILL

+Process Name:	DEBARKER SN-04
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - DEBARKER SN-04

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0200
Emission Limit 1 Unit:	LB/T

Process Information: EL DORADO SAWMILL

+Process Name:	SAWMILL SN-05
+Process Type:	30.007
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - SAWMILL SN-05

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.3500
Emission Limit 1 Unit:	LB/T

Process Information: EL DORADO SAWMILL

+Process Name:	PLANER MILL SN-06
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - PLANER MILL SN-06

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/SCF

Process Information: EL DORADO SAWMILL

+Process Name:	YATES HOG MILL SN-07
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - YATES HOG MILL SN-07

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0010
Emission Limit 1 Unit:	GR/DSCF

Process Information: EL DORADO SAWMILL

+Process Name:	TRUCK BIN SN-08
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - TRUCK BIN SN-08

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	GR/DSCF

Process Information: EL DORADO SAWMILL

+Process Name:	HAUL ROADS SN-09
+Process Type:	99.150
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - HAUL ROADS SN-09

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	12.7000
Emission Limit 1 Unit:	LB/H

Process Information: EL DORADO SAWMILL

+Process Name:	MATERIAL PROCESSING SN-11
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - MATERIAL PROCESSING SN-11

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0200
Emission Limit 1 Unit:	LB/T

Process Information: EL DORADO SAWMILL

+Process Name:	STORAGE PILES FOR BARK, SAWDUST, WOOD CHIPS SN-12
+Process Type:	13.120
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - STORAGE PILES FOR BARK, SAWDUST, WOOD CHIPS SN-12

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	0.0200
Emission Limit 1 Unit:	LB/T

Process Information: EL DORADO SAWMILL

+Process Name:	PLANER MILL WOODWASTE STORAGE BIN SN-13
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: EL DORADO SAWMILL - PLANER MILL WOODWASTE STORAGE BIN SN-13

+Pollutant Name	Particulate matter, total (TPM)

Emission Limit 1:	0.0011
Emission Limit 1 Unit:	LB/T

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: RESOLUTE FOREST PRODUCTS - ALABAMA SAWMILL

RBLC ID:	AL-0305
+Corporate/Company Name:	RESOLUTE FP U.S., INC.
+Facility Name:	RESOLUTE FOREST PRODUCTS - ALABAMA SAWMILL
Facility County:	TALLADEGA
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	06/24/2015 ACT

Process Information: RESOLUTE FOREST PRODUCTS - ALABAMA SAWMILL

+Process Name:	Continuous Direct-Fired Lumber Dry Kilns with 35 mmbtu/hr Wood Fired Burner
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	108.33
Throughput Unit:	mmbf/yr - each

Pollutant Information: RESOLUTE FOREST PRODUCTS - ALABAMA SAWMILL - Continuous Direct-Fired Lumber Dry Kilns with 35 mmbtu/hr Wood Fired Burner

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.7300
Emission Limit 1 Unit:	LB/MBF

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: OLA

RBLC ID:	AR-0120
+Corporate/Company Name:	DELTIC TIMBER CORPORATION
+Facility Name:	OLA
Facility County:	YELL
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110056342569
Permit Issuance Date:	02/11/2015 ACT

Process Information: OLA

+Process Name:	Dry Kiln No. 3 (SN-06)
+Process Type:	30.800
Primary Fuel:	None
Throughput:	105.00
Throughput Unit:	MMBF/yr

Pollutant Information: OLA - Dry Kiln No. 3 (SN-06)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	33.3000
Emission Limit 1 Unit:	LB/H

Process Information: OLA

+Process Name:	Drying Kiln No. 4 (SN-12)
+Process Type:	30.800
Primary Fuel:	None
Throughput:	105.00
Throughput Unit:	MMBF/yr

Pollutant Information: OLA - Drying Kiln No. 4 (SN-12)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	33.2000
Emission Limit 1 Unit:	LB/H

Process Information: OLA

+Process Name:	Drying Kiln No. 5 (SN-21)
+Process Type:	30.800
Primary Fuel:	wood residue
Throughput:	60.00
Throughput Unit:	MMBF/yr

Pollutant Information: OLA - Drying Kiln No. 5 (SN-21)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	23.5000
Emission Limit 1 Unit:	LB/H

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Facility Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND

RBLC ID:	AR-0122
+Corporate/Company Name:	GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PL
+Facility Name:	GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND
Facility County:	CLARK
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110017425071
Permit Issuance Date:	02/06/2015 ACT

Process Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND

+Process Name:	SN-09 #4 LUMBER KILN
+Process Type:	30.800
Primary Fuel:	NATURAL GAS
Throughput:	130.00
Throughput Unit:	MILLION BOARD FEET

Pollutant Information: GEORGIA-PACIFIC WOOD PRODUCTS SOUTH LLC (GURDON PLYWOOD AND - SN-09 #4 LUMBER KILN

+Pollutant Name	Volatile Organic Compounds (VOC)

Emission Limit 1:	3.8000
Emission Limit 1 Unit:	LB/ 1000 BOARD FEET

Previous Page

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Facility Information: KAPSTONE CHARLESTON KRAFT LLC- SUMMERVILLE

RBLC ID:	SC-0163
+Corporate/Company Name:	KAPSTONE CHARLESTON KRAFT LLC
+Facility Name:	KAPSTONE CHARLESTON KRAFT LLC- SUMMERVILLE
Facility County:	DORCHESTER
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110041047033
Permit Issuance Date:	01/20/2015 ACT

Process Information: KAPSTONE CHARLESTON KRAFT LLC- SUMMERVILLE

+Process Name:	LUMBER KILNS
+Process Type:	30.800
Primary Fuel:	
Throughput:	194.83
Throughput Unit:	MMBF/YR

Pollutant Information: KAPSTONE CHARLESTON KRAFT LLC- SUMMERVILLE - LUMBER KILNS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	225.6000
Emission Limit 1 Unit:	T/YR

Previous Page

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Facility Information: MILLPORT WOOD PRODUCTS FACILITY

RBLC ID:	AL-0273

+Corporate/Company Name:	WEYER HAEUSER NR COMPANY
+Facility Name:	MILLPORT WOOD PRODUCTS FACILITY
Facility County:	LAMAR
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000589257
Permit Issuance Date:	12/30/2014 ACT

Process Information: MILLPORT WOOD PRODUCTS FACILITY

+Process Name:	Continuous direct-lumber dry kiln
+Process Type:	30.800
Primary Fuel:	Green sawdust
Throughput:	140000.00
Throughput Unit:	mbf/yr

Pollutant Information: MILLPORT WOOD PRODUCTS FACILITY - Continuous direct-lumber dry kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.7000
Emission Limit 1 Unit:	LB

Previous Page

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Facility Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT

RBLC ID:	SC-0165
+Corporate/Company Name:	NEW SOUTH COMPANIES, INC.
+Facility Name:	NEW SOUTH COMPANIES, INC. - CONWAY PLANT
Facility County:	HORRY
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000740789
Permit Issuance Date:	10/15/2014 ACT

Process Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT

+Process Name:	LUMBER KILNS
+Process Type:	30.800
Primary Fuel:	
Throughput:	295.60
Throughput Unit:	MMBF/YR

Pollutant Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT - LUMBER KILNS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	602.0000
Emission Limit 1 Unit:	T/YR

Previous Page

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Facility Information: WHITEHOUSE LUMBER MILL

RBLC ID:	FL-0343
+Corporate/Company Name:	WEST FRASER, INC
+Facility Name:	WHITEHOUSE LUMBER MILL
Facility County:	DUVAL
Facility State:	FL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110002524563
Permit Issuance Date:	09/09/2014 ACT

Process Information: WHITEHOUSE LUMBER MILL

+Process Name:	Direct-Fired Continuous Kilns
+Process Type:	30.800
Primary Fuel:	Wood waste
Throughput:	40.00
Throughput Unit:	MMBTU/H

Pollutant Information: WHITEHOUSE LUMBER MILL - Direct-Fired Continuous Kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/THOUSAND BOARD FT

Previous Page

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Facility Information: SIMPSON LUMBER COMPANY, LLC

RBLC ID:	SC-0164
+Corporate/Company Name:	SIMPSON LUMBER COMPANY, LLC
+Facility Name:	SIMPSON LUMBER COMPANY, LLC
Facility County:	GEORGETOWN
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110040922712
Permit Issuance Date:	06/20/2014 ACT

Process Information: SIMPSON LUMBER COMPANY, LLC

+Process Name:	LUMBER KILNS
+Process Type:	30.800
Primary Fuel:	
Throughput:	166.00
Throughput Unit:	MMBF/YR

Pollutant Information: SIMPSON LUMBER COMPANY, LLC - LUMBER KILNS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	156.0000
Emission Limit 1 Unit:	T/YR

Previous Page

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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: CAMDEN PLANT

RBLC ID:	SC-0169

+Corporate/Company Name:	NEW SOUTH LUMBER COMPANY, INC.
+Facility Name:	CAMDEN PLANT
Facility County:	KERSHAW
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	Not Found
Permit Issuance Date:	06/18/2014 ACT

Process Information: CAMDEN PLANT

+Process Name:	DKN6 - DIRECT FIRED CONTINUOUS LUMBER DRYING KILN
+Process Type:	30.800
Primary Fuel:	WOOD
Throughput:	80.00
Throughput Unit:	MMBD-FT/YR

Pollutant Information: CAMDEN PLANT - DKN6 - DIRECT FIRED CONTINUOUS LUMBER DRYING KILN

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	150.4000
Emission Limit 1 Unit:	T/YR

Previous Page

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Facility Information: ELLIOTT SAWMILLING COMPANY, INC.

RBLC ID:	SC-0180
+Corporate/Company Name:	ELLIOTT SAWMILLING COMPANY, INC.
+Facility Name:	ELLIOTT SAWMILLING COMPANY, INC.
Facility County:	HAMPTON
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110020016061
Permit Issuance Date:	06/10/2014 ACT

Process Information: ELLIOTT SAWMILLING COMPANY, INC.

+Process Name:	Batch Drying Lumber Kiln No. 5
+Process Type:	30.800
Primary Fuel:	wood
Throughput:	53.00
Throughput Unit:	MM BF/YR

Pollutant Information: ELLIOTT SAWMILLING COMPANY, INC. - Batch Drying Lumber Kiln No. 5

+Pollutant Name	Particulate matter, total (TPM)
Emission Limit 1:	25.4100
Emission Limit 1 Unit:	LB/T
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/M BF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: PERRY MILL

RBLC ID:	FL-0340
+Corporate/Company Name:	GILMAN BUILDING PRODUCTS
+Facility Name:	PERRY MILL
Facility County:	TAYLOR
Facility State:	FL
EPA Region:	4
+SIC Code:	242
Facility Registry System Number:	110041048522
Permit Issuance Date:	04/01/2014 ACT

Process Information: PERRY MILL

+Process Name:	Direct-fired lumber drying kiln
+Process Type:	30.800
Primary Fuel:	Waste wood
Throughput:	90.00
Throughput Unit:	million board ft/yr

Pollutant Information: PERRY MILL - Direct-fired lumber drying kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/THOUSAND BOARD FT

Previous Page

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Facility Information: CHOPIN MILL

RBLC ID:	LA-0293
+Corporate/Company Name:	MARTCO LIMITED PARTNERSHIP
+Facility Name:	CHOPIN MILL
Facility County:	NATCHITOCHES
Facility State:	LA
EPA Region:	6
+SIC Code:	2436
Facility Registry System Number:	110041907292
Permit Issuance Date:	03/18/2014 ACT

Process Information: CHOPIN MILL

+Process Name:	Lumber Dry Kilns Nos. 1 & 2 (EQT 37 & 38)
+Process Type:	30.800
Primary Fuel:	
Throughput:	25000.00
Throughput Unit:	M BD-FT/YR

Pollutant Information: CHOPIN MILL - Lumber Dry Kilns Nos. 1 & 2 (EQT 37 & 38)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	24.5100
Emission Limit 1 Unit:	LB/H

Previous Page

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Facility Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS

RBLC ID:	LA-0281
+Corporate/Company Name:	TIN INC. DBA TEMPLE-INLAND
+Facility Name:	SOUTHWEST LOUISIANA LUMBER OPERATIONS
Facility County:	BEAUREGARD
Facility State:	LA
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110013836661
Permit Issuance Date:	01/31/2014 ACT

Process Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS

+Process Name:	EP-3K -Wood-Fired Dry Kiln No. 1
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	60000.00
Throughput Unit:	MBF/YR

Pollutant Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS - EP-3K -Wood-Fired Dry Kiln No. 1

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	29.2700
Emission Limit 1 Unit:	LB/H

Process Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS

+Process Name:	EP-4K – Wood-Fired Dry Kiln No. 2
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	60000.00
Throughput Unit:	MBF/YR

Pollutant Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS - EP-4K – Wood-Fired Dry Kiln No. 2

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	29.2700
Emission Limit 1 Unit:	LB/H

Process Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS

+Process Name:	EP-5K – Wood-Fired Dry Kiln No. 3
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	60000.00
Throughput Unit:	MBF/YR

Pollutant Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS - EP-5K – Wood-Fired Dry Kiln No. 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	29.2700
Emission Limit 1 Unit:	LB/H

Process Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS

+Process Name:	EP-6K – Wood-Fired Dry Kiln No. 4
+Process Type:	30.800
Primary Fuel:	Wood
Throughput:	60000.00
Throughput Unit:	MBF/YR

Pollutant Information: SOUTHWEST LOUISIANA LUMBER OPERATIONS - EP-6K – Wood-Fired Dry Kiln No. 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	29.2700
Emission Limit 1 Unit:	LB/H

Previous Page

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Facility Information: DODSON DIVISION

RBLC ID:	LA-0294
+Corporate/Company Name:	WEYERHAEUSER NR COMPANY
+Facility Name:	DODSON DIVISION
Facility County:	WINN
Facility State:	LA
EPA Region:	6
+SIC Code:	2421

Facility Registry System Number: 110006021125
Permit Issuance Date: 12/30/2013 ACT

Process Information: DODSON DIVISION

+Process Name:	Wood-Fired Boiler (017, EQT 6)
+Process Type:	11.120
Primary Fuel:	Wood/bark
Throughput:	256.44
Throughput Unit:	MMBTU/H

Pollutant Information: DODSON DIVISION - Wood-Fired Boiler (017, EQT 6)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.4500
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Dry Kiln 1 (033, EQT 15)
+Process Type:	30.800
Primary Fuel:	
Throughput:	14.00
Throughput Unit:	M BD-FT/H

Pollutant Information: DODSON DIVISION - Dry Kiln 1 (033, EQT 15)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	79.4000
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Dry Kiln 2 (034, EQT 16)
+Process Type:	30.800
Primary Fuel:	
Throughput:	14.00
Throughput Unit:	M BD-FT/H

Pollutant Information: DODSON DIVISION - Dry Kiln 2 (034, EQT 16)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	79.4000
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Dry Kiln 3 (035, EQT 17)
+Process Type:	30.800
Primary Fuel:	
Throughput:	16.00
Throughput Unit:	M BD-FT/H

Pollutant Information: DODSON DIVISION - Dry Kiln 3 (035, EQT 17)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	90.7400
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Dry Kiln 4 (051, EQT 32)
+Process Type:	30.800
Primary Fuel:	
Throughput:	16.00
Throughput Unit:	M BD-FT/H

Pollutant Information: DODSON DIVISION - Dry Kiln 4 (051, EQT 32)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	90.7400
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Fugitive Ink Emissions (039, FUG 4)
+Process Type:	99.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: DODSON DIVISION - Fugitive Ink Emissions (039, FUG 4)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.3400
Emission Limit 1 Unit:	LB/H

Process Information: DODSON DIVISION

+Process Name:	Mold Inhibitor Emissions (052, FUG 5)
+Process Type:	99.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: DODSON DIVISION - Mold Inhibitor Emissions (052, FUG 5)

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.9400
Emission Limit 1 Unit:	LB/H

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Facility Information: WEST FRASER-OPELIKA LUMBER MILL

RBLC ID:	AL-0257
+Corporate/Company Name:	WEST FRASER, INC.
+Facility Name:	WEST FRASER-OPELIKA LUMBER MILL
Facility County:	LEE
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110003033155
Permit Issuance Date:	11/01/2013 ACT

Process Information: WEST FRASER-OPELIKA LUMBER MILL

+Process Name:	Two(2) 87.5 MMBF/YR Continuous kilns with a 35 MMBtu/hr direct-fired wood burner
+Process Type:	30.800
Primary Fuel:	Wood Shavings
Throughput:	175.00
Throughput Unit:	MMBF/YR

Pollutant Information: WEST FRASER-OPELIKA LUMBER MILL - Two(2) 87.5 MMBF/YR Continuous kilns with a 35 MMBtu/hr direct-fired wood burner

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
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Report Date: 10/03/2022 Control Technology Determinations (Freeform)

Facility Information: DELTIC TIMBER CORPORATION WALDO

RBLC ID:	AR-0123
+Corporate/Company Name:	DELTIC TIMBER CORPORATION
+Facility Name:	DELTIC TIMBER CORPORATION WALDO
Facility County:	COLUMBIA
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	110017420487
Permit Issuance Date:	10/18/2013 ACT

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	KILN NO. 3
+Process Type:	30.800
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - KILN NO. 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	27.0000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	KILN NO. 4
+Process Type:	30.800
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - KILN NO. 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	46.2000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	KILN NO. 5
+Process Type:	30.800
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - KILN NO. 5

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	27.0000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	WOOD-FIRED BOILER #1
+Process Type:	13.120
Primary Fuel:	WOOD RESIDUE
Throughput:	60.00
Throughput Unit:	MMBTU/H

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - WOOD-FIRED BOILER #1

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	WOOD-FIRED BOILER #2
+Process Type:	13.120
Primary Fuel:	WOOD RESIDUE
Throughput:	60.00
Throughput Unit:	MMBTU/H

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - WOOD-FIRED BOILER #2

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	LB/H

Process Information: DELTIC TIMBER CORPORATION WALDO

+Process Name:	WOOD-FIRED BOILER #3
+Process Type:	13.120
Primary Fuel:	WOOD RESIDUE
Throughput:	60.00
Throughput Unit:	MMBTU/H

Pollutant Information: DELTIC TIMBER CORPORATION WALDO - WOOD-FIRED BOILER #3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.2000
Emission Limit 1 Unit:	LB/H

Previous Page

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Facility Information: THE WESTERVELT COMPANY

RBLC ID:	AL-0259
+Corporate/Company Name:	THE WESTERVELT COMPANY
+Facility Name:	THE WESTERVELT COMPANY
Facility County:	HALE
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110017414626
Permit Issuance Date:	08/21/2013 ACT

Process Information: THE WESTERVELT COMPANY

+Process Name:	Three (3) 93 MMBF/Y Continous, Dual path, indirect fired kilns
+Process Type:	30.800
Primary Fuel:	Steam (Indirect heat)
Throughput:	0
Throughput Unit:	

Pollutant Information: THE WESTERVELT COMPANY - Three (3) 93 MMBF/Y Continous, Dual path, indirect fired kilns

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	4.5700
Emission Limit 1 Unit:	LB/MMBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: WEST FRASER, INC. (LEOLA LUMBER MILL)

RBLC ID:	AR-0135
+Corporate/Company Name:	WEST FRASER, INC.
+Facility Name:	WEST FRASER, INC. (LEOLA LUMBER MILL)
Facility County:	GRANT
Facility State:	AR
EPA Region:	6
+SIC Code:	2421
Facility Registry System Number:	Not Entered
Permit Issuance Date:	08/05/2013 ACT

Process Information: WEST FRASER, INC. (LEOLA LUMBER MILL)

+Process Name:	LUMBER KILN, CONTINUOUS, INDIRECT
+Process Type:	30.800
Primary Fuel:	
Throughput:	275.00
Throughput Unit:	MMBF/YR

Pollutant Information: WEST FRASER, INC. (LEOLA LUMBER MILL) - LUMBER KILN, CONTINUOUS, INDIRECT

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT

RBLC ID:	SC-0162
+Corporate/Company Name:	NEW SOUTH LUMBER COMPANY, INC.
+Facility Name:	NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT
Facility County:	DARLINGTON
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110061778214
Permit Issuance Date:	06/18/2013 ACT

Process Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT

+Process Name:	DKN1
+Process Type:	30.800
Primary Fuel:	STEAM HEATED
Throughput:	60.00
Throughput Unit:	MMBF/YR

Pollutant Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT - DKN1

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	343.9800
Emission Limit 1 Unit:	T/YR

Process Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT

+Process Name:	DKN4
+Process Type:	30.800
Primary Fuel:	STEAM HEATED
Throughput:	60.00
Throughput Unit:	MMBF/YR

Pollutant Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT - DKN4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	343.9800
Emission Limit 1 Unit:	T/YR

Process Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT

+Process Name:	DKN5
+Process Type:	30.800
Primary Fuel:	WOOD WASTE
Throughput:	75.00
Throughput Unit:	MMBF/YR

Pollutant Information: NEW SOUTH LUMBER COMPANY, INC. DARLINGTON PLANT - DKN5

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	141.0000
Emission Limit 1 Unit:	T/YR

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: WEST FRASER - NEWBERRY LUMBER MILL

RBLC ID:	SC-0151
+Corporate/Company Name:	WEST FRASER TIMBER CO. LTD
+Facility Name:	WEST FRASER - NEWBERRY LUMBER MILL
Facility County:	NEWBERRY
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110013287987
Permit Issuance Date:	04/30/2013 ACT

Process Information: WEST FRASER - NEWBERRY LUMBER MILL

+Process Name:	TWO - 35 MMBTU/H DUAL PATH, DIRECT FIRED, CONTINUOUS LUMBER KILNS, 15 THOUSAND BF/H, EACH
+Process Type:	30.800
Primary Fuel:	SAWDUST
Throughput:	0
Throughput Unit:	

Pollutant Information: WEST FRASER - NEWBERRY LUMBER MILL - TWO - 35 MMBTU/H DUAL PATH, DIRECT FIRED, CONTINUOUS LUMBER KILNS, 15 THOUSAND BF/H, EACH

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/MBF

Previous Page

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Facility Information: WEST FRASER, INC. - MAPLESVILE MILL

RBLC ID:	AL-0258
+Corporate/Company Name:	WEST FRASER, INC.
+Facility Name:	WEST FRASER, INC. - MAPLESVILE MILL
Facility County:	CHILTON
Facility State:	AL
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110054818701
Permit Issuance Date:	04/15/2013 ACT

Process Information: WEST FRASER, INC. - MAPLESVILE MILL

+Process Name:	Two(2) 100 MMBF/Y Continuous direct fired kiln
+Process Type:	30.800
Primary Fuel:	Wood Residuals
Throughput:	200.00
Throughput Unit:	MMBF/YR

Pollutant Information: WEST FRASER, INC. - MAPLESVILE MILL - Two(2) 100 MMBF/Y Continuous direct fired kiln

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.7600
Emission Limit 1 Unit:	LB/MBF

Previous Page

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Required fields are denoted by "+".

Facility Information: KLAUSNER HOLDING USA, INC

RBLC ID:	SC-0149
+Corporate/Company Name:	KLAUSNER HOLDING USA, INC
+Facility Name:	KLAUSNER HOLDING USA, INC
Facility County:	ORANGEBURG
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	not available
Permit Issuance Date:	01/03/2013 ACT

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	BIOMASS BOILER EU001
+Process Type:	12.120
Primary Fuel:	WET BARK, WOOD
Throughput:	120.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - BIOMASS BOILER EU001

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0032
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.1400
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.4000
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0170
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Methane
Emission Limit 1:	37.1000
Emission Limit 1 Unit:	T/YR

+Pollutant Name	Nitrous Oxide (N2O)
Emission Limit 1:	4.9000
Emission Limit 1 Unit:	T/YR

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	BIOMASS BOILER EU002
+Process Type:	13.120
Primary Fuel:	WET BARK, WOOD
Throughput:	120.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - BIOMASS BOILER EU002

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.1400
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.4000
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0170
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Methane

Emission Limit 1:	37.1000
Emission Limit 1 Unit:	T/YR

+Pollutant Name	Nitrous Oxide (N2O)
Emission Limit 1:	4.9000
Emission Limit 1 Unit:	T/YR

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0032
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0320
Emission Limit 1 Unit:	LB/MMBTU

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	NATURAL GAS BOILER EU003
+Process Type:	11.310
Primary Fuel:	NATURAL GAS
Throughput:	46.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - NATURAL GAS BOILER EU003

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.0360
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.0390
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0030
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0050

Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	NATURAL GAS BOILER EU004
+Process Type:	13.310
Primary Fuel:	NATURAL GAS
Throughput:	46.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - NATURAL GAS BOILER EU004

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.0360
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.0390
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0030
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	NATURAL GAS BOILER EU005
+Process Type:	13.310
Primary Fuel:	NATURAL GAS
Throughput:	46.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - NATURAL GAS BOILER EU005

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.0360
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.0390
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0030
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU
+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	NATURAL GAS BOILER EU006
+Process Type:	13.310
Primary Fuel:	NATURAL GAS
Throughput:	46.00
Throughput Unit:	MMBTU/H

Pollutant Information: KLAUSNER HOLDING USA, INC - NATURAL GAS BOILER EU006

+Pollutant Name	Nitrogen Oxides (NOx)
Emission Limit 1:	0.0360
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Carbon Monoxide
Emission Limit 1:	0.0390
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0030
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0020
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	LB/MMBTU

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	LUMBER DRYING KILNS EU007
+Process Type:	30.800
Primary Fuel:	
Throughput:	700.00
Throughput Unit:	MILLION BOARD FOOT PER YEAR

Pollutant Information: KLAUSNER HOLDING USA, INC - LUMBER DRYING KILNS EU007

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.5000
Emission Limit 1 Unit:	LB/MBF

+Pollutant Name	Particulate matter, fugitive
Emission Limit 1:	0.0220
Emission Limit 1 Unit:	LB/MBF

+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)

Emission Limit 1:	0.0130
Emission Limit 1 Unit:	LB/MBF

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	LB/MBF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	PLANER MILL EU008
+Process Type:	30.540
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - PLANER MILL EU008

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	DRY SHAVING STORAGE SILO EU009
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - DRY SHAVING STORAGE SILO EU009

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0040

Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	SORTER LINE TRIMMERS EXTRACTION SYSTEM EU011
+Process Type:	30.540
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - SORTER LINE TRIMMERS EXTRACTION SYSTEM EU011

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 2.5 µ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	FLY ASH STORAGE SILO EU012
+Process Type:	99.120
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - FLY ASH STORAGE SILO EU012

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 10 µ (FPM10)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0050
Emission Limit 1 Unit:	GR/DSCF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	COLORS, INKS, LACQUERS EU013
+Process Type:	30.006
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - COLORS, INKS, LACQUERS EU013

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	0.0300
Emission Limit 1 Unit:	LB/MBF

Process Information: KLAUSNER HOLDING USA, INC

+Process Name:	DRY SHAVINGS STORAGE SILO EU010
+Process Type:	30.999
Primary Fuel:	
Throughput:	0
Throughput Unit:	

Pollutant Information: KLAUSNER HOLDING USA, INC - DRY SHAVINGS STORAGE SILO EU010

+Pollutant Name	Particulate matter, filterable (FPM)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 10 μ (FPM10)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

+Pollutant Name	Particulate matter, filterable < 2.5 μ (FPM2.5)
Emission Limit 1:	0.0040
Emission Limit 1 Unit:	GR/DSCF

Previous Page

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Required fields are denoted by "+".

Facility Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT

RBLC ID:	SC-0135
+Corporate/Company Name:	NEW SOUTH COMPANIES, INC.
+Facility Name:	NEW SOUTH COMPANIES, INC. - CONWAY PLANT
Facility County:	HORRY
Facility State:	SC
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	110000740789
Permit Issuance Date:	09/24/2012 ACT

Process Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT

+Process Name:	LUMBER KILNS
+Process Type:	30.800
Primary Fuel:	
Throughput:	380.56
Throughput Unit:	MMBD-FT/YR

Pollutant Information: NEW SOUTH COMPANIES, INC. - CONWAY PLANT - LUMBER KILNS

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	799.1800
Emission Limit 1 Unit:	T/YR

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: SIMPSON LUMBER COMPANY, LLC

RBLC ID:	SC-0136
+Corporate/Company Name:	SIMPSON LUMBER COMPANY, LLC
+Facility Name:	SIMPSON LUMBER COMPANY, LLC
Facility County:	GEORGETOWN
Facility State:	SC
EPA Region:	4
+SIC Code:	2421

Facility Registry System Number:	110040922712
Permit Issuance Date:	08/29/2012 ACT

Process Information: SIMPSON LUMBER COMPANY, LLC

+Process Name:	DIRECT-FIRED LUMBER DRYING KILN NO. 4
+Process Type:	30.800
Primary Fuel:	DRY WOOD WASTE
Throughput:	34.00
Throughput Unit:	MMBTU/H

Pollutant Information: SIMPSON LUMBER COMPANY, LLC - DIRECT-FIRED LUMBER DRYING KILN NO. 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	104.0000
Emission Limit 1 Unit:	T/YR

Previous Page

NOTE: Draft determinations are marked with a " * " beside the RBLC ID.
Required fields are denoted by "+".

Facility Information: SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS

RBLC ID:	GA-0146
+Corporate/Company Name:	SIMPSON LUMBER CO.
+Facility Name:	SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS
Facility County:	EFFINGHAM
Facility State:	GA
EPA Region:	4
+SIC Code:	2421
Facility Registry System Number:	0110002438997
Permit Issuance Date:	04/25/2012 ACT

Process Information: SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS

+Process Name:	KILN 3
+Process Type:	30.800
Primary Fuel:	WASTE WOOD
Throughput:	65000000.00
Throughput Unit:	BF/YR

Pollutant Information: SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS - KILN 3

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.8300
Emission Limit 1 Unit:	LB/MBF

Process Information: SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS

+Process Name:	KILN 4
+Process Type:	30.800
Primary Fuel:	WASTE WOOD
Throughput:	73000000.00
Throughput Unit:	BF/YR

Pollutant Information: SIMPSON LUMBER CO, LLC MELDRIM OPERATIONS - KILN 4

+Pollutant Name	Volatile Organic Compounds (VOC)
Emission Limit 1:	3.9300
Emission Limit 1 Unit:	LB/MBF

Previous Page