FAIRCLOTH FOREST PRODUCTS
SWAINSBORO, GEORGIA OPERATIONS

DRY KILN 2 (DK02)
PSD PERMIT APPLICATION

201 PINETREE TRAIL
SWAINSBORO, GEORGIA 30401
EMANUEL COUNTY

FEBRUARY 2022

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APPENDICES

1.0 Introduction and Purpose

Faircloth Forest Products proposes to construct and operate a second direct-fired dry kiln (DK02) at the existing sawmill operations located at 201 Pinetree Trail, Swainsboro, Georgia 30401 (Emanuel County). Air emissions from the site were initially authorized by Construction Permit 2421-107-0032-E-01-0 (issued November 17, 2017) followed by Title V Operating Permit 2421-107-0032-V-02-0 (issued September 21, 2018). The applicant herein seeks agency authorization to construct and operate a second dry kiln (DK02) and ancillary operations in accordance with Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(7) and 40 Code of Federal Regulations (CFR) 52.21. The application narrative that follows is presented in the following format:

- **Introduction and Purpose (Section 1);**
- **Facility Description (Section 2);**
- **Process Description (Section 3);**
- **Emission Calculations (Section 4);**
- **Permitting Requirements (Section 5);**
- **Emission Limits (Section 6);**
- **BACT Assessment (Section 7);**
- **Class I Area Review (Section 8);**
- **Ozone Impacts Analysis (Section 9); and**
- **Additional Impacts Assessment (Section 10).**

The following appendices are offered in support of the forgoing narrative elements:

Appendix A	Facility Diagrams
Appendix B	Process Flow Diagram
Appendix C	Emission Calculations
Appendix D	Regulatory Review
Appendix E	RBLC Search Results
Appendix F	Forms

2.0 Facility Description

Faircloth Forest Products manufactures kiln-dried lumber and remanufactured wood products. A site location map and a general plot plan are provided in Appendix A for reference. Pine logs are received at the debarker where the bark is removed and hogged for fuel. The logs are then cut in the sawmill into dimensional framing lumber. The green, rough lumber is then dried in Dry Kiln 1 (DK01). DK01 is a direct-fired unit with a heat input rating of 40 million British thermal units per hour (MMBtu/hr) a lumber drying capacity of 92 million board-feet per year (MMBF/yr). The dried, rough lumber is then

trimmed to size and profiled in the Reman Mill. Sawmill scraps are fed through a chipper and sold. Reman Mill scraps (shavings and sawdust) are fed through a hog, pneumatically conveyed via cyclone (CD01) to a shavings bin, and sold.

3.0 Project Description

A process flow diagram is provided in Appendix B for reference. The facility proposes to install a second dry kiln (DK02). DK02 will be a direct-fired unit a heat input rating of 40 MMBtu/hr and a lumber drying capacity of 80 MMBF/yr. Cyclone (CD01) will be upgraded to handle the additional Reman Mill throughput (shavings and sawdust).

4.0 Emission Calculations

Emission calculations are provided in Appendix C. Air emissions include oxides of nitrogen (NOX), carbon monoxide (CO), sulfur dioxide (SO2), particulate matter (PM), particulate matter less than 10 microns in aerodynamic diameter (PM10), particulate matter less than 2.5 microns in aerodynamic diameter (PM2.5), volatile organic compounds (VOC), and hazardous air pollutants (HAP). The site-wide potential to emit is based on the unrestricted, maximum potential throughput of all operations under its respective physical and operational design at 8,760 hours of operation subject to the DK01 and DK02 board-feet capacity representations noted above.

5.0 Emission Limits

The proposed operations will be potentially subject to the emission limits under one or more of the following regulatory frameworks:

- New Source Performance Standards (NSPS) program codified at 40 CFR Part 60;
- The NESHAP program found at 40 CFR Parts 61 and 63; and
- GRAQC 391-3-1-.02(2) Emission Limitations and Standards.

A detailed review of all potentially applicable NSPS, NESHAP, and GRAQC is provided in Appendix D.

5.1 NSPS

All Part 60 NSPS promulgated have been adopted by reference in GRAQC 391-3-1-.02(8) New Source Performance Standards. All promulgated NSPS are categorically inapplicable to the proposed operations.

5.2 NESHAP

All Part 61 and Part 63 NESHAP promulgated have been adopted by reference in GRAQC 391-3-1-.02(9) Emission Standards for Hazardous Air Pollutants. Except for

the NESHAP discussed immediately below, all other promulgated NESHAP are categorically inapplicable to the proposed operations.

5.2.1 40 CFR 63, Subpart A

All operations subject to a category specific NESHAP are also subject to the general provisions contained in 40 CFR Part 63, Subpart A [40 CFR 63.1]. The NESHAP Subpart A general provisions include definitions [40 CFR 63.2], preconstruction review requirements [40 CFR 63.5], testing provisions [40 CFR 63.7], monitoring requirements [40 CFR 63.8], notification requirements [40 CFR 63.9], recordkeeping and reporting provisions [40 CFR 63.10], and control device and work practice requirements [40 CFR 63.11].

5.2.2 40 CFR 63, Subpart DDDD

40 CFR 63, Subpart DDDD National Emission Standard for Hazardous Air Pollutants for Plywood and Composite Wood Products regulates HAP emissions from plywood and composite wood products (PCWP) facilities that are major sources of HAP. In general, NESHAP impose maximum achievable control technology (MACT) requirements, i.e. the maximum degree of reduction in HAP emissions achievable by sources in the category or subcategory to which such emission standard applies. Under the PCWP NESHAP, however, lumber kilns are not subject to any of the compliance options specified in Tables 1A or 1B to Subpart DDDD, any of the operating requirements specified in Table 2 to Subpart DDDD, or any of the work practice requirements specified in Table 3 to Subpart DDDD. According to 40 CFR 63.2252, lumber kiln operations are only subject to the initial notification requirements specified in 40 CFR 63.9(b).

5.3 GRAQC 391-3-1-.02(2)

In addition to the NSPS and NESHAP noted above, the proposed operations may also be subject to various emission limits noted in GRAQC 391-3-1-.02(2) Emission Limitations and Standards. A review of the more salient GRAQC is provided immediately below. A review of all potentially applicable GRAQC is provided in Appendix E.

5.3.1 GRAQC 391-3-1-.02(2)(b)

GRAQC 391-3-1-.02(2)(b) governs visible emissions and provides no person shall cause, let, suffer, permit, or allow emissions from any source the opacity of which is equal to or greater than forty (40) percent.

5.3.2 GRAQC 391-3-1-.02(2)(e)

GRAQC 391-3-1-.02(2)(d) governs particulate emissions from manufacturing operations and restricts particulate emissions to not more than the emission rate noted by the following:

For process rates < 30 tons per hour: $E = 4.1P^{0.67}$
For process rates > 30 tons per hour: $E = 55P^{0.11} - 40$

where E equals the allowable emission rate (lb/hr) and P equals the process rate (ton/hr).

5.3.3 GRAQC 391-3-1-.02(2)(g)

GRAQC 391-3-1-.02(2)(g) governs SO2 emissions from fuel combustion operations and provides that applicable sources below 100 MMBtu/hr heat input shall not burn fuel containing more than 2.5 percent sulfur measured by weight.

5.3.4 GRAQC 391-3-1-.02(2)(n)

GRAQC 391-3-1-.02(2)(n) governs fugitive dust and requires all persons responsible for any operation, process, handling, transportation or storage facility which may result in fugitive dust to take all reasonable precautions to prevent such dust from becoming airborne. GRAQC 391-3-1-.02(2)(n)(2) also limits the percent opacity from any fugitive dust source to less than 20 percent.

6.0 Permitting Requirements

The Faircloth Forest Products operations are located in Emanuel County, a locale currently designated as “attainment” or “unclassifiable” for all criteria pollutants. Accordingly, the Prevention of Significant Deterioration (PSD) program codified at 40 Code of Federal Regulations (CFR) 52.21 *et seq*. potentially applies. The state of Georgia implements and enforce the federal PSD construction permit program pursuant to Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(7). Table 1 summarizes the DK02 project PSD scope of review. The addition of DK02 to the existing operations triggers PSD review for VOC only. The project does not trigger PSD review for PM, PM10, PM2.5, NOX, CO, SO2, sulfuric acid (H2SO4), total reduced sulfur (TRS), hydrogen sulfide (H2S), lead (Pb), fluorides, or greenhouse gases (GHG). Completed DK02 (new) and CD01 (modified) construction permit forms are provided in Appendix F.

Table 1. PSD Scope of Review

Pollutant	*One Kiln (tpy)*	*Two Kilns (tpy)*	*Difference (tpy)*	*SER (tpy)*	*PSD Review?*
CO	*20.0*	*37.3*	*17.4*	*100*	*No*
NOX	*12.7*	*23.7*	*11.0*	*40*	*No*
PM	*32.1*	*55.3*	*23.3*	*25*	*No*
PM10	*17.6*	*30.6*	*13.0*	*15*	*No*
PM2.5	*13.8*	*23.5*	*9.70*	*10*	*No*
SO2	*4.38*	*8.76*	*4.38*	*40*	*No*
VOC	*184*	*344*	*160*	*40*	*Yes*
CO2e	*36,714*	*73,428*	*36,714*	*75,000*	*No*

7.0 BACT Assessment

Section 169 of the Clean Air Act defines *Best Available Control Technology (BACT)* as an emission limitation reflecting a degree of pollutant reduction that the permitting authority (on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs) determines is achievable for such a facility through application of processes, methods, systems, and/or techniques. In all cases BACT must establish emission limitations or specific design characteristics at least as stringent as any applicable New Source Performance Standards (NSPS). In addition, if the agency determines that there is no practical way to impose and enforce a numerical emissions standard, the agency may require a design, equipment, work practice, or operations standard (or combination thereof). The five steps of a top-down BACT review are listed below:

Step 1: Identification of all control technologies;

Step 2: Elimination of technically infeasible options;

Step 3: Ranking of remaining control technologies by control effectiveness;

Step 4: Evaluation of the most effective controls and documentation of results; and

Step 5: Selection of BACT.

As noted in Section 5.2.2 above, under the PCWP NESHAP, lumber kilns are not subject to any of the compliance options specified in Tables 1A or 1B to Subpart DDDD, any of the operating requirements specified in Table 2 to Subpart DDDD, or any of the work practice requirements specified in Table 3 to Subpart DDDD. The DK02 project triggers PSD for VOC only, and all of the HAP at issue under Subpart DDDD are VOC. MACT is – by definition – more stringent than BACT. As such, it is a legal impossibility for a lumber kiln

VOC BACT assessment to impose add-on controls for VOC. Nevertheless, a top-down VOC BACT review follows.

7.1 Identify

Potential control technologies and reduction techniques for VOC emissions are identified here:

- Thermal Incineration
- Oxidation Catalyst
- Biofiltration
- VOC Recovery
- No Controls

7.1.1 Thermal Incineration

Thermal Incineration refers to the combustion of organic compounds at a sufficiently high temperature and adequate residence time. Thermal Incineration systems can be categorized according to the type of heat recovery employed and whether a catalyst is used. Regenerative systems (with or without a catalyst) use direct contact heat exchangers made from a ceramic material which can operate at the high temperatures needed to achieve ignition of the exhaust gas. The exhaust gas enters the first bed where the gas is heated to a desired combustion temperature, then subsequently enters the second bed where heat from combustion is recovered and stored in the bed. The beds alternate so the exhaust gas can utilize the stored heat in order to raise the incoming exhaust gas to the desired temperature. Recuperative systems (also with or without a catalyst) achieve largely the same result using indirect heat exchange whereby a primary heat exchanger preheats the incoming vent stream with recovered heat from the exiting stream. Typical VOC reduction efficiencies range from 60 to 90%.

7.1.2 Oxidation Catalyst

The VOC formation process most often involves an interruption in the fuel oxidation process. Oxidation Catalyst technology completes the final oxidation step over a precious metal catalyst bed. Platinum group metal (PGM) catalysts are the current standard typically utilizing platinum, palladium, and/or rhodium. Most systems employ a monolith honeycomb substrate coated with the PGM compounds with many small parallel channels, offering a high catalytic contact area to the exhaust gases. The “light-off” temperatures of an oxidation catalyst system and is considered

one of the important catalyst performance parameters and can range from 600 to 1,200 F depending on the configuration. Oxidation Catalyst systems are typically installed directly into the exhaust streams where the optimal temperature zone exists. Typical VOC reduction efficiencies range from 60 to 90%.

7.1.3 Biofiltration

Biofiltration involves the biodegradation of exhaust stream constituents as the exhaust passes through a biologically active filter material. Biofiltration is most successful when treating low molecular weight and highly soluble organic compounds with simple structures. Compounds with complex bond structures generally require more energy to break down than naturally occurring microorganisms can provide. Pre-conditioning of the gas stream is often required to control temperatures, moisture content, and particulate matter. The bacteria commonly used in biofiltration are highly temperature sensitive and are susceptible to damage by broadly varying process conditions such as those that can be expected from particleboard operations. Biofiltration systems may also require the addition of nutrients to support microbial growth. Typical VOC reduction efficiencies range from 60 to 90%.

7.1.4 VOC Recovery

VOC Recovery technologies typically take various forms. **Adsorption** is the process by which molecules collect on and adhere to the surface of an adsorbent solid due to physical and/or chemical forces. Activated carbon is typically used as an adsorbent because of its large surface area, a critical factor in the adsorption process. Adsorption systems can control VOC in the range of 500 ppm to one-fourth of the Lower Explosion Limit (LEL). **Absorption** systems, in contrast, certain constituents of a gas stream are selectively removed by a liquid solvent. The control of gas-phase VOC using absorption relies on contact between the contaminated gas and a liquid in which the contaminants are soluble or with which it will chemically react. The degree of control depends on gas solubility, throughput rates, contact time, and contact mechanism. Absorption systems are most effective for gas streams with pollutant concentrations between 250 and 10,000 ppm. Finally, **condensing** systems utilize a refrigeration source to cool the exhaust stream to convert the VOC from a gaseous phase to a liquid phase for eventual recovery. Condensing systems are most effective for gas streams with VOC concentrations between 5,000 and 10,000 ppm.

7.1.5 No Controls

A notable characteristic of the BACT definition is the direct authorization to consider methods, systems, and/or techniques as alternatives to add-on control devices. As such, BACT evaluations must include pollution prevention measures as well as any other feasible methods of reducing emissions. "Good combustion practices," "proper design and operation," and "best management practices" are the most common terms of art and have no precise definition. These terms are most commonly understood to encompass a wide range of design, equipment, management, maintenance, training, work practice, and operating standards that have the intended, reliable, and reproducible effect of minimizing pollutant formation. For the sake of this VOC BACT assessments "proper kiln design and operation" is presented as the minimum acceptable BACT conclusion when all add-on controls have been eliminated due to technical, cost, or other considerations.

7.2 Eliminate

A candidate control option can be eliminated from consideration if there exist process specific considerations that would prohibit implementation to the operations consideration. Based on the irresolvable technical considerations summarized below, the following technologies are eliminated from further consideration:

Thermal Incineration. The exhaust gas stream from a typical lumber kiln has a temperature of around 220 F and a high moisture content. The high moisture content and relatively low exit temperature of the exhaust gas makes Thermal Incineration (with or without a catalyst) unsuitable for VOC abatement from lumber kilns. There are no known applications demonstrating Thermal Incineration (with or without a catalyst) to be a safe, effective, and reliable VOC abatement technology for lumber kilns. Accordingly, the technology is eliminated from further consideration.

Oxidation Catalyst. The exhaust gas stream from a typical lumber kiln has a temperature of around 220 F and a high moisture content. The high moisture content and relatively low exit temperature of the exhaust gas makes Oxidation Catalysts unsuitable for VOC abatement from lumber kilns. There are no known applications demonstrating Oxidation Catalysts to be a safe, effective, and reliable VOC abatement technology for lumber kilns. Accordingly, the technology is eliminated from further consideration.

Biofiltration. Biofiltration has been most successfully applied to the board press operations at oriented strand board (OSB), medium density fiberboard (MDF), and particleboard operations. The phenol/formaldehyde resins utilized in the board presses combined in the relative cool (less than 105 F) exhaust streams provide excellent conditions to foster organism growth as well as water-soluble VOC destruction. The exhaust gas stream from a typical lumber kiln has a temperature of around 220 F and comprise mostly water-insoluble terpenes. There are no known applications demonstrating biofiltration to be a safe, effective, and reliable VOC abatement technology for lumber kilns. Accordingly, the technology is eliminated from further consideration.

VOC Recovery. All three VOC Recovery technologies (adsorption, absorption, and condensing) require exhaust streams severely laden with VOC. The low VOC concentration of the lumber kiln exhaust combined with the difficulty in condensing long-chain terpenes render any application of a VOC Recovery system a fruitless endeavor. There are no known applications demonstrating VOC Recovery systems to be safe, effective, and reliable on lumber kilns. Accordingly, the technology is eliminated from further consideration.

7.3 Rank

In this case, all lumber kiln VOC add-on controls have been eliminated on technical grounds. As such, the sole remaining lumber kiln VOC abatement approach is "proper kiln design and operation."

7.4 Evaluate

In this case, all lumber kiln VOC add-on controls have been eliminated on technical grounds. As such, the sole remaining lumber kiln VOC abatement approach is "proper kiln design and operation."

7.5 Select BACT

In this case, all lumber kiln VOC add-on controls have been eliminated on technical grounds. As such, the sole remaining lumber kiln VOC abatement approach is "proper kiln design and operation." This conclusion is consistent with the RACT/BACT/LAER Clearinghouse (RBLC) search results provided in Appendix E for reference.

8.0 Class I Area Review

Class I areas are regions of special national or regional value from a natural, scenic, recreational, or historic perspective and are afforded the highest degree of protection.

The DK02 project triggers PSD review for VOC only. There do not exist any Class I increments or air quality related values (AQRV) based on VOC. Therefore, a Class I area review is not required.

9.0 Class II Area Review

Class II areas are all other regions not classified as Class I. The DK02 project triggers PSD review for VOC only. As such, neither a Class II area significant impact analysis nor a de minimis monitoring concentration assessment is required.

10.0 Ozone Monitoring

If a proposed project results in a net VOC or NOX emission increase greater than 100 tpy, the PSD rules potentially require pre-construction monitoring for ozone. The proposed project will result in a net VOC emission increase of 160 tpy. The nearest ozone monitor to the facility is located in Macon, Georgia (AQS ID 13-021-0012), approximately 70 miles west of the facility. The design value (i.e., 3-year average of 4th highest maximum daily 8-hour ozone concentrations during 2018-2021) is approximately 54 ppb. Given the monitor proximity and regional nature of background ozone, the Sandersville monitor provides a representative indication of ozone concentrations in the vicinity of facility and pre-construction monitoring for ozone may be waived.

11.0 Ozone Impacts

As required by the 2017 revisions to EPA's Guideline on Air Quality Models (Appendix W), an analysis of the impact of the projected VOC and NOx emissions on secondary ozone formation was accomplished in accordance with the Guidance on the Development of Modeled Emission Rates for Precursors (MERP) as a Tier l Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program" (April 30, 2019). The most conservative Class II area VOC and NOx MERP values for ozone in Georgia are 3,980 tpy and 156 tpy, respectively. The impact from ozone formation due to precursor emissions is estimated as following:

PEMIS_NOX/MERP_NOX + PEMIS_VOC/MERP_VOC = 11/156 + 160/3,980 = 0.11 ppb

The total ozone impact of 0.11 ppb is below the ozone significant impact level (SIL) of one (1) part per billion (ppb). Therefore, no further ozone impact analysis is required.

12.0 Additional Impacts

Finally, the PSD regulations require an analysis of impairment to visibility, soils, and vegetation that may occur as a result of a facility modification and an analysis of the air quality impact projected for the area as a result of the general commercial, residential, and other growth associated with the proposed project.

Soils and Vegetation

The relevant pollutants underpinning an additional impacts assessment for soils and vegetation are NO2, SO2, and CO. The project triggers PSD review for VOC only. Therefore, an additional impacts assessment for soils and vegetation is not required.

Growth

An additional impacts assessment for growth evaluates the impact associated with the project on the commercial, residential, and industrial growth within the project vicinity. The purpose of this assessment is to (1) predict how much growth is likely to occur as a result of the project and (2) evaluate the resulting air quality impacts of this growth. Negligible growth during construction is expected and minimal long-term growth (i.e., general commercial, residential, industrial or other secondary growth in the area) is expected following the completion of the project. As such, the resulting air quality impacts can be responsibly viewed as non-existent.

Visibility

The relevant pollutants underpinning an additional impacts assessment for visibility are PM, NOX, and SO2. The project triggers PSD review for VOC only. Therefore, an additional impacts assessment for visibility is not required.

APPENDIX A
FACILITY DIAGRAMS

SITE LOCATION MAP

Scale	Latitude	Longitude
See Legend	32° 31' 29"	82° 19' 52"

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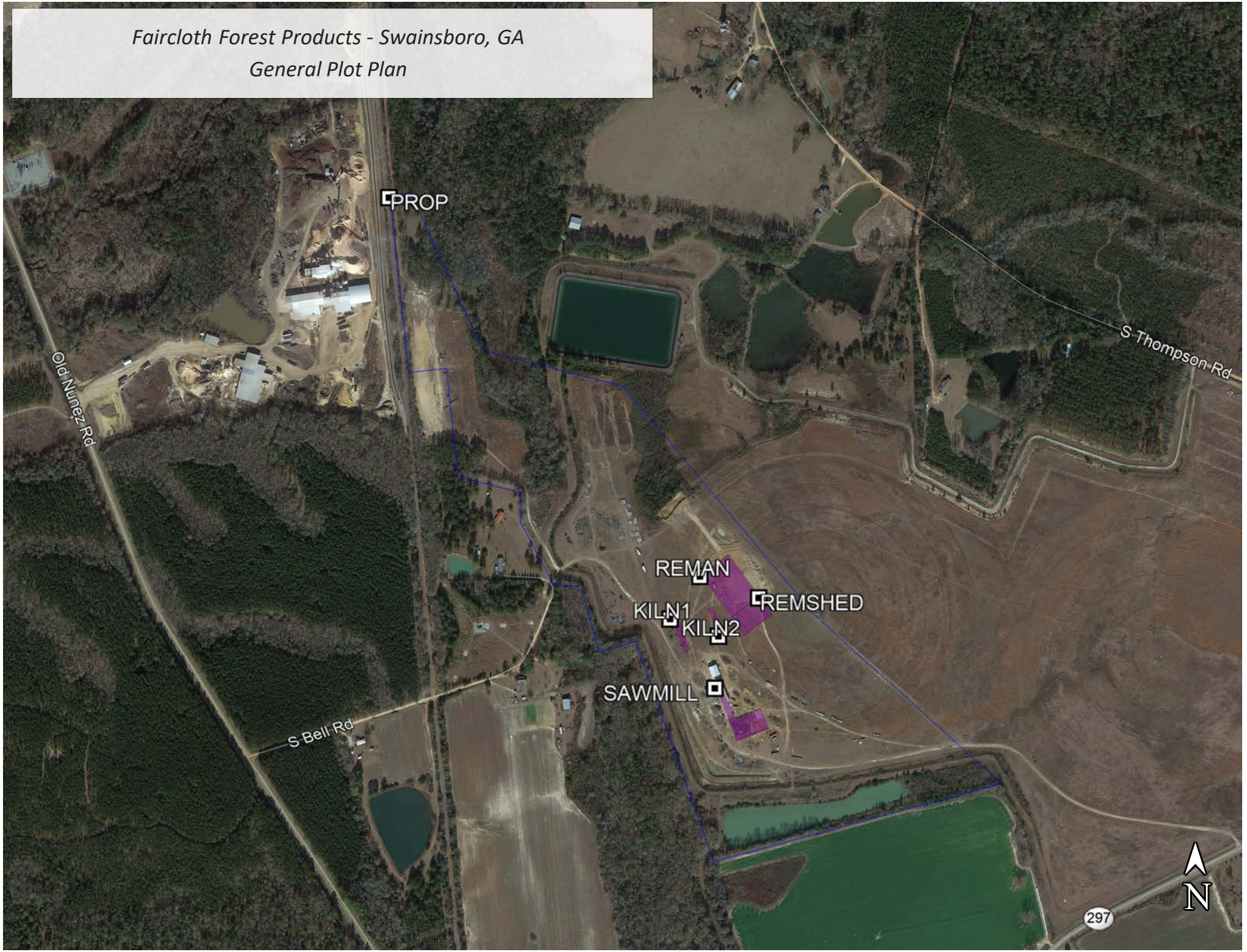
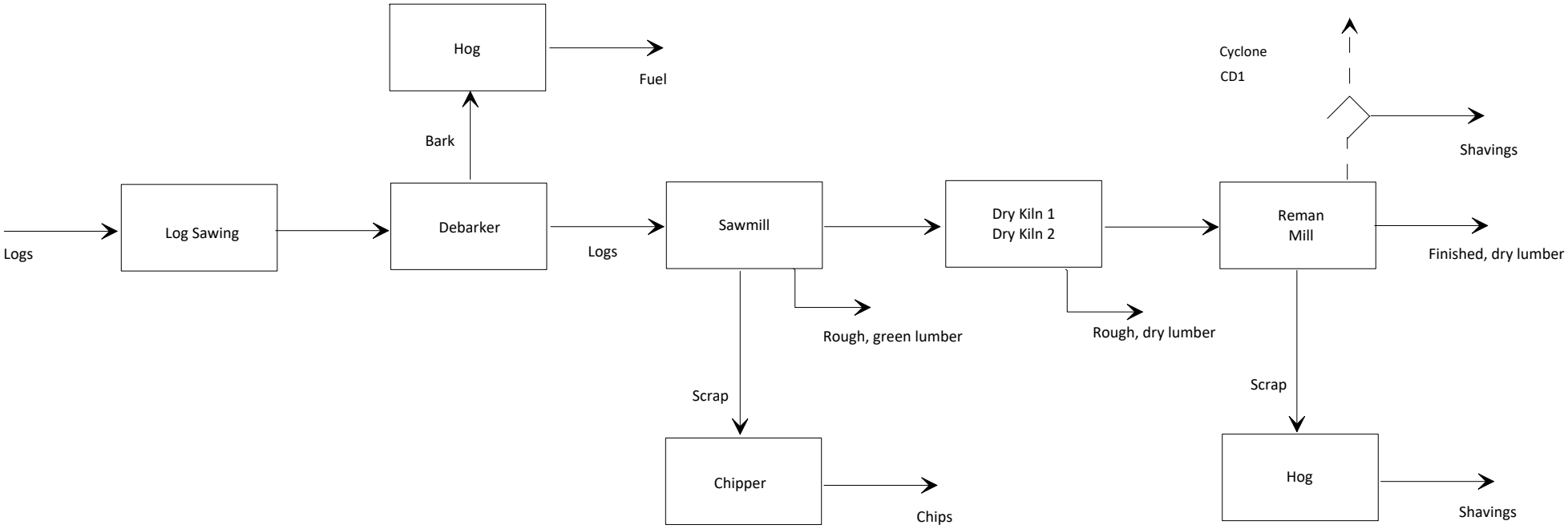
MN (6.4° W)

0 500 1000 1500 ft
Data Zoom 13-7

Faircloth Forest Products - Swainsboro, GA
General Plot Plan



APPENDIX B
PROCESS FLOW DIAGRAM



Faircloth Forest Products

Process Flow Diagram

201 Pine Tree Trail
Swainsboro, GA 3040
Emanuel County

APPENDIX C
EMISSIONS ESTIMATES

Table 1. Dry Kiln 1

Pollutant	Throughput	Factor	Units	tpy	Notes
CO	92 MMBF	0.434	lb/MBF	20.0	[1]
NOX		0.276		12.7	
PM		0.140		6.44	[2]
PM10		0.104		4.78	
PM2.5		0.104		4.78	
VOC		4		184	[3]
Acetaldehyde		4.50E-02		2.07	[4]
Acrolein		6.00E-03		0.28	[1]
Formaldehyde		3.86E-02		1.78	[2]
Methanol		1.61E-01		7.41	
Phenol		1.03E-02		0.47	[1]
SO2	40 MMBtu	2.50E-02	lb/MMBtu	4.38	[5]
CO2e		1.05E+02		36,714	[6][7]

[1] NCASI February 2013 Wood Products Air Emission Factor Database.
[2] See agency narrative in support of application TV-517390. All PM10 assumed to be PM2.5
[3] GA EPD suggsted VOC emission factor for lumber dry kilns.
[4] NCASI Technical Bulletin 845.
[5] AP 42, Chapter 1.6 Wood Residue Combustion in Boilers.
[6] 40 CFR 98 - Mandatory Greenhouse Gas Reporting Rule Tables C-1 and C-2.
[7] Adjusted for GWP and converted to short tons.

Table 2. Sawmill

Operation	Throughput	Units	PM Factor	PM10 Factor	PM2.5 Factor	Units	PM tpy	PM10 tpy	PM2.5 tpy	Notes
Debarker	819,977	tons	0.024	0.012	0.006	lb/ton	1.97	0.98	0.49	[1][2][3]
Bark Hog	49,199						0.59	0.30	0.15	
Chippers	260,137						3.12	1.56	0.78	
Log Sawing	770,778		0.35	0.175	0.0875		6.74	3.37	1.69	
Conveyance	396,049		4.3703E-05	2.067E-05	3.1301E-06		0.01	0.004	0.001	[1][4]
Truck Loading	346,850						0.01	0.004	0.001	[1][4]

[1] Throughput values per application TV-517390 (2 kilns) apportioned to 1 kiln capacity
[2] https://www.epa.gov/sites/default/files/2016-09/documents/spmpteef_memo.pdf
[3] Assumes 80% enclosure on Debarker and 95% enclosure on Log Sawing.
[4] See agency narrative in support of application TV-517390. See also AP 42, Chapter 13.2.4

Table 3. Reman Mill

Operation	Throughput	Units	PM Factor	PM10 Factor	PM2.5 Factor	Units	PM tpy	PM10 tpy	PM2.5 tpy	Notes
Board Sawing	253,865	tons	0.35	0.175	0.0875	lb/ton	2.22	1.11	0.56	[1][2][3]
Reman Hog	38,080		0.024	0.012	0.006		0.46	0.23	0.11	
Truck Loading			4.16E-04	1.97E-04	2.98E-05		0.01	0.004	0.001	
Conveyance	28,000	acfm	0.01	0.005	0.005	gr/cf	10.5	5.26	5.26	[1][4]

[1] Throughput values per application TV-517390 (2 kilns) apportioned to 1 kiln capacity
[2] https://www.epa.gov/sites/default/files/2016-09/documents/spmpteef_memo.pdf
[3] Assumes 95% enclosure on Board Sawing.
[4] CD01 pre-project airflow and assumed grain loadings.

Table 4. Facility PTE - Single Kiln Operation

Pollutant	tpy
CO	20.0
NOX	12.7
PM	32.1
PM10	17.6
PM2.5	13.8
VOC	184
Acetaldehyde	2.07
Acrolein	0.28
Formaldehyde	1.78
Methanol	7.41
Phenol	0.47
SO2	4.38
CO2e	36,714

Table 5. Dry Kiln 1

Pollutant	Throughput	Factor	Units	tpy	Notes
CO	92 MMBF	0.434	lb/MBF	20.0	[1]
NOX		0.276		12.7	
PM		0.140		6.44	[2]
PM10		0.104		4.78	
PM2.5		0.104		4.78	
VOC		4		184	[3]
Acetaldehyde		4.50E-02		2.07	[4]
Acrolein		6.00E-03		0.28	[1]
Formaldehyde		3.86E-02		1.78	[2]
Methanol		1.61E-01		7.41	
Phenol		1.03E-02		0.47	[1]
SO2	40 MMBtu	2.50E-02	lb/MMBtu	4.38	[5]
CO2e		1.05E+02		36,714	[6][7]

[1] NCASI February 2013 Wood Products Air Emission Factor Database.
[2] See agency narrative in support of application TV-517390. All PM10 assumed to be PM2.5
[3] GA EPD suggsted VOC emission factor for lumber dry kilns.
[4] NCASI Technical Bulletin 845.
[5] AP 42, Chapter 1.6 Wood Residue Combustion in Boilers.
[6] 40 CFR 98 - Mandatory Greenhouse Gas Reporting Rule Tables C-1 and C-2.
[7] Adjusted for GWP and converted to short tons.

Table 6. Dry Kiln 2

Pollutant	Throughput	Factor	Units	tpy	Notes
CO	80 MMBF	0.434	lb/MBF	17.4	[1]
NOX		0.276		11.0	
PM		0.140		5.60	[2]
PM10		0.104		4.16	
PM2.5		0.104		4.16	
VOC		4		160	[3]
Acetaldehyde		4.50E-02		1.80	[4]
Acrolein		6.00E-03		0.24	[1]
Formaldehyde		3.86E-02		1.54	[2]
Methanol		1.61E-01		6.44	
Phenol		1.03E-02		0.41	[1]
SO2	40 MMBtu	2.50E-02	lb/MMBtu	4.38	[5]
CO2e		1.05E+02		36,714	[6][7]

[1] NCASI February 2013 Wood Products Air Emission Factor Database.
[2] See agency narrative in support of application TV-517390. All PM10 assumed to be PM2.5
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[5] AP 42, Chapter 1.6 Wood Residue Combustion in Boilers.
[6] 40 CFR 98 - Mandatory Greenhouse Gas Reporting Rule Tables C-1 and C-2.
[7] Adjusted for GWP and converted to short tons.

Table 7. Sawmill

Operation	Throughput	Units	PM Factor	PM10 Factor	PM2.5 Factor	Units	PM tpy	PM10 tpy	PM2.5 tpy	Notes
Debarker	1,533,000	tons	0.024	0.012	0.006	lb/ton	3.68	1.84	0.92	[1][2][3]
Bark Hog	91,980						1.10	0.55	0.28	
Chippers	486,344						5.84	2.92	1.46	
Log Sawing	1,441,020		0.35	0.175	0.0875		12.6	6.30	3.15	
Conveyance	740,439		4.3703E-05	2.067E-05	3.1301E-06		0.02	0.01	0.001	[1][4]
Truck Loading	648,459						0.01	0.01	0.001	[1][4]

[1] Throughput values per application TV-517390.
[2] https://www.epa.gov/sites/default/files/2016-09/documents/spmpteef_memo.pdf
[3] Assumes 80% enclosure on Debarker and 95% enclosure on Log Sawing.
[4] See agency narrative in support of application TV-517390. See also AP 42, Chapter 13.2.4

Table 8. Reman Mill

Operation	Throughput	Units	PM Factor	PM10 Factor	PM2.5 Factor	Units	PM tpy	PM10 tpy	PM2.5 tpy	Notes
Board Sawing	474,617	tons	0.35	0.175	0.0875	lb/ton	4.15	2.08	1.04	[1][2][3]
Reman Hog	71,193		0.024	0.012	0.006		0.85	0.43	0.21	
Truck Loading			4.16E-04	1.97E-04	2.98E-05		0.01	0.01	0.001	
Conveyance	40,000	acfm	0.01	0.005	0.005	gr/cf	15.0	7.51	7.51	[1][4]

[1] Throughput values per application TV-517390 (2 kilns) apportioned to 1 kiln capacity
[2] https://www.epa.gov/sites/default/files/2016-09/documents/spmpteef_memo.pdf
[3] Assumes 95% enclosure on Board Sawing.
[4] CD01 post-project airflow and assumed grain loadings.

Table 9. Facility PTE - Double Kiln Operation

Pollutant	tpy
CO	37.3
NOX	23.7
PM	55.3
PM10	30.6
PM2.5	23.5
VOC	344
Acetaldehyde	3.87
Acrolein	0.52
Formaldehyde	3.32
Methanol	13.8
Phenol	0.89
SO2	8.76
CO2e	73,428

Table 10. PSD SER Summary

Pollutant	*One Kiln (tpy)*	*Two Kilns (tpy)*	*Difference (tpy)*	*SER (tpy)*	*PSD Review?*
CO	*20.0*	*37.3*	*17.4*	*100*	*No*
NOX	*12.7*	*23.7*	*11.0*	*40*	*No*
PM	*32.1*	*55.3*	*23.3*	*25*	*No*
PM10	*17.6*	*30.6*	*13.0*	*15*	*No*
PM2.5	*13.82*	*23.5*	*9.70*	*10*	*No*
SO2	*4.38*	*8.76*	*4.38*	*40*	*No*
VOC	*184*	*344*	*160*	*40*	*Yes*
CO2e	*36,714*	*73,428*	*36,714*	*75,000*	*No*

APPENDIX D
REGULATORY REVIEW

Table D1 - 40 CFR Part 60 New Source Performance Standards (NSPS)

Subpart	Description	Applicability
Subpart A	General Provisions	Not applicable
Subpart B	Adoption and Submittal of State Plans for Designated Facilities	Not applicable
Subpart C1	Emission Guidelines and Compliance Times	Not applicable
Subpart Ca	Reserved	N/A
Subpart Cb	Emission Guidelines and Compliance Times for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995	Not applicable
Subpart Cc	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	Not applicable
Subpart Cd	Emission Guidelines and Compliance Times for Sulfuric Acid Production Units	Not applicable
Subpart Ce	Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators	Not applicable
Subpart D	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Commenced After August 17, 1971	Not applicable
Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978	Not applicable
Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Not applicable
Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Not applicable
Subpart E	Standards of Performance for Incinerators	Not applicable
Subpart Ea	Standards of Performance for Municipal Waste Combustors for Which Construction Commenced After December 20, 1989	Not applicable
Subpart Eb	Standards of Performance for Municipal Waste Combustors for Which Construction Commenced After September 20, 1994	Not applicable
Subpart Ec	Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction Commenced After June 20, 1996	Not applicable
Subpart F	Standards of Performance for Portland Cement Plants	Not applicable
Subpart G	Standards of Performance for Nitric Acid Plants	Not applicable
Subpart H	Standards of Performance for Sulfuric Acid Plants	Not applicable
Subpart I	Standards of Performance for Hot Mix Asphalt Facilities	Not applicable
Subpart J	Standards of Performance for Petroleum Refineries	Not applicable
Subpart Ja	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	Not applicable
Subpart K	Standards of Performance for Storage Vessels (…) for Which Construction (…) Commenced After June 11, 1973, and Prior to May 19, 1978	Not applicable
Subpart Ka	Standards of Performance for Storage Vessels (…) for Which Construction (…) Commenced After May 18, 1978, and Prior to July 23, 1984	Not applicable
Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (…) for Which Construction (…) Commenced after July 23, 1984	Not applicable
Subpart L	Standards of Performance for Secondary Lead Smelters	Not applicable
Subpart M	Standards of Performance for Secondary Brass and Bronze Production Plants	Not applicable
Subpart N	Standards of Performance for Primary Emissions from Basic Oxygen Process Furnaces for Which Construction Commenced After June 11, 1973	Not applicable
Subpart Na	Standards of Performance for Basic Oxygen Steelmaking Facilities for Which Construction Commenced After January 20, 1983	Not applicable
Subpart O	Standards of Performance for Sewage Treatment Plants	Not applicable
Subpart P	Standards of Performance for Primary Copper Smelters	Not applicable
Subpart Q	Standards of Performance for Primary Zinc Smelters	Not applicable
Subpart R	Standards of Performance for Primary Lead Smelters	Not applicable
Subpart S	Standards of Performance for Primary Aluminum Reduction Plants	Not applicable
Subpart T	Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants	Not applicable
Subpart U	Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants	Not applicable
Subpart V	Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants	Not applicable
Subpart W	Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants	Not applicable
Subpart X	Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	Not applicable
Subpart Y	Standards of Performance for Coal Preparation Plants	Not applicable
Subpart Z	Standards of Performance for Ferroalloy Production Facilities	Not applicable
Subpart AA	Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983	Not applicable
Subpart AA	Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	Not applicable
Subpart BB	Standards of Performance for Kraft Pulp Mills	Not applicable
Subpart CC	Standards of Performance for Glass Manufacturing Plants	Not applicable
Subpart DD	Standards of Performance for Grain Elevators	Not applicable
Subpart EE	Standards of Performance for Surface Coating of Metal Furniture	Not applicable
Subpart FF	Reserved	N/A
Subpart GG	Standards of Performance for Stationary Gas Turbines	Not applicable
Subpart HH	Standards of Performance for Lime Manufacturing Plants	Not applicable
Subpart KK	Standards of Performance for Lead-Acid Battery Manufacturing Plants	Not applicable
Subpart LL	Standards of Performance for Metallic Mineral Processing plants	Not applicable
Subpart MM	Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations	Not applicable
Subpart NN	Standards of Performance for Phosphate Rock Plants	Not applicable
Subpart PP	Standards of Performance for Ammonium Sulfate Manufacture	Not applicable
Subpart QQ	Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing	Not applicable
Subpart RR	Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations	Not applicable
Subpart SS	Standards of Performance for Industrial Surface Coating: Large Appliances	Not applicable
Subpart TT	Standards of Performance for Metal Coil Surface Coating	Not applicable
Subpart UU	Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture	Not applicable
Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	Not applicable
Subpart VV	Standards of Performance for Equipment Leaks of VOC in the SOCMI for Which Construction (…) Commenced After November 7, 2006	Not applicable
Subpart WW	Standards of Performance for the Beverage Can Surface Coating Industry	Not applicable
Subpart XX	Standards of Performance for Bulk Gasoline Terminals	Not applicable
Subpart AAA	Standards of Performance for New Residential Wood Heaters	Not applicable
Subpart BBB	Standards of Performance for the Rubber Tire Manufacturing Industry	Not applicable

Table D1 - 40 CFR Part 60 New Source Performance Standards (NSPS), cont.

Subpart	Description	Applicability
Subpart CCC	Reserved	N/A
Subpart DDD	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry	Not applicable
Subpart EEE	Reserved	N/A
Subpart FFF	Standards of Performance for Flexible Vinyl and Urethane Coating and Printing	Not applicable
Subpart GGG	Standards of Performance for Equipment Leaks in Petroleum Refineries	Not applicable
Subpart GGG	Standards of Performance for Equipment Leaks in Petroleum Refineries for which Construction (…) Commenced After November 7, 2006	Not applicable
Subpart HHH	Standards of Performance for Synthetic Fiber Production Facilities	Not applicable
Subpart III	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the SOCMI Air Oxidation Unit Processes	Not applicable
Subpart JJJ	Standards of Performance for Petroleum Dry Cleaners	Not applicable
Subpart KKK	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	Not applicable
Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions	Not applicable
Subpart MMM	Reserved	N/A
Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From SOCMI Distillation Operations	Not applicable
Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	N/A
Subpart PPP	Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants	Not applicable
Subpart QQQ	Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems	N/A
Subpart RRR	Standards of Performance for Volatile Organic Compound Emissions From SOCMI Reactor Processes	Not applicable
Subpart SSS	Standards of Performance for Magnetic Tape Coating Facilities	Not applicable
Subpart TTT	Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	Not applicable
Subpart UUU	Standards of Performance for Calciners and Dryers in Mineral Industries	Not applicable
Subpart VVV	Standards of Performance for Polymeric Coating of Supporting Substrates Facilities	Not applicable
Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills	Not applicable
Subpart AAAA	Standards of Performance for Small Municipal Waste Combustion Units for Which Commenced After August 30, 1999	Not applicable
Subpart BBBB	Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed On or Before August 30, 1999	Not applicable
Subpart CCCC	Standards of Performance for CISWI Units Which Construction Commenced After November 30, 1999	Not applicable
Subpart DDDD	Emission Guidelines and Compliance Times for CISWI Units that Commenced Construction On or Before November 30, 1999	Not applicable
Subpart EEEE	Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004	Not applicable
Subpart FFFF	Emission Guidelines for Other Solid Waste Incineration Units that Commenced Construction On or Before December 9, 2004	Not applicable
Reserved	Reserved	N/A
Subpart HHHH	Emission Guidelines and Compliance Times for Coal-Fired Electric Steam Generating Units	Not applicable
Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Not applicable
Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Not applicable
Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	Not applicable
Subpart LLLL	Standards of Performance for New Sewage Sludge Incineration Units	Not applicable
Subpart MMMM	Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	Not applicable
Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution	Not applicable
Subpart PPPP	Reserved	N/A
Subpart QQQQ	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces	Not applicable
Subpart UUUU	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces	Not applicable
Subpart TTTT	Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units	Not applicable

Table D2 - 40 CFR Part 61 National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Subpart	***Description***	***Applicability***
Subpart A	*General Provisions*	*Not applicable*
Subpart B	*National Emission Standards for Radon Emissions from Underground Uranium Mines*	*Not applicable*
Subpart C	*National Emission Standards for Beryllium*	*Not applicable*
Subpart D	*National Emission Standard for Beryllium Rocket Motor Firing*	*Not applicable*
Subpart E	*National Emission Standards for Mercury*	*Not applicable*
Subpart F	*National Emission Standards for Vinyl Chloride*	*Not applicable*
Subpart G	*Reserved*	*N/A*
Subpart H	*National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities*	*Not applicable*
Subpart I	*National Emission Standards for Radionuclide Emissions from Federal Other Than Nuclear Regulatory Commission Licensees*	*Not applicable*
Subpart J	*National Emission Standards for Equipment Leaks (Fugitive Emission Sources) of Benzene*	*Not applicable*
Subpart K	*National Emission Standards for Radionuclide Emissions From Elemental Phosphorus Plants*	*Not applicable*
Subpart L	*National Emission Standards for Benzene Emissions from Coke By-Product Recovery Plants*	*Not applicable*
Subpart M	*National Emission Standards for Asbestos*	*Not applicable*
Subpart N	*National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants*	*Not applicable*
Subpart O	*National Emission Standard for Inorganic Arsenic Emissions from Primary Copper Smelters*	*Not applicable*
Subpart P	*National Emission Standard for Inorganic Arsenic Emissions from Arsenic Trioxide and Metallic Arsenic Production Facilities*	*Not applicable*
Subpart Q	*National Emission Standard for Radon Emissions from Department of Energy Facilities*	*Not applicable*
Subpart R	*National Emission Standard for Radon Emissions from Phosphogypsum Stacks*	*Not applicable*
Subpart S	*Reserved*	*N/A*
Subpart T	*National Emission Standards for Radon Emissions from the Disposal of Uranium Mill Tailings*	*Not applicable*
Subpart U	*Reserved*	*N/A*
Subpart V	*National Emission Standards for Equipment Leaks (Fugitive Emission Sources)*	*Not applicable*
Subpart W	*National Emission Standards for Radon Emissions from Operating Mill Tailings*	*Not applicable*
Subpart X	*Reserved*	*N/A*
Subpart Y	*National Emission Standards for Benzene Emissions from Benzene Storage Vessels*	*Not applicable*
Subparts Z	*Reserved*	*N/A*
Subparts AA	*Reserved*	*N/A*
Subpart BB	*National Emission Standard for Benzene Emissions from Benzene Transfer Operations*	*Not applicable*
Subparts CC	*Reserved*	*N/A*
Subparts DD	*Reserved*	*N/A*
Subparts EE	*Reserved*	*N/A*
Subpart FF	*National Emission Standard for Benzene Waste Operations*	*Not applicable*

Table D3 - 40 CFR Part 63 Maximum Achievable Control Technology (MACT) Standards

Subpart	Description	Applicability
Subpart A	General Provisions	Applicable
Subpart B	Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)	Not applicable
Subpart C	List of Hazardous Air Pollutants, Petition Process, Lesser Quantity Designations, Source Category List	Not applicable
Subpart D	Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants	Not applicable
Subpart E	Approval of State Programs and Delegation of Federal Authorities	Not applicable
Subpart F	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry	Not applicable
Subpart G	National Emission Standards for Organic Hazardous Air Pollutants From SOCMI Process Vents, Storage Vessels, and Wastewater	Not applicable
Subpart H	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks	Not applicable
Subpart I	National Emission Standards for Organic Hazardous Air Pollutants for Processes Subject to the Negotiated Regulation for Equipment Leaks	Not applicable
Subpart J	National Emission Standards for Hazardous Air Pollutants for PVC and Copolymers Production	Not applicable
Subpart K	Reserved	N/A
Subpart L	National Emission Standards for Coke Oven Batteries	N/A
Subpart M	National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities	Not applicable
Subpart N	National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks	Not applicable
Subpart O	Ethylene Oxide Emissions Standards for Sterilization Facilities	Not applicable
Subpart P	Reserved	N/A
Subpart Q	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers	Not applicable
Subpart R	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)	Not applicable
Subpart S	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry	Not applicable
Subpart T	National Emission Standards for Halogenated Solvent Cleaning	Not applicable
Subpart U	National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins	Not applicable
Subpart V	Reserved	N/A
Subpart W	National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production	Not applicable
Subpart X	National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting	Not applicable
Subpart Y	National Emission Standards for Marine Vessel Loading Operations	Not applicable
Subpart Z	Reserved	N/A
Subpart AA	National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants	Not applicable
Subpart BB	National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants	Not applicable
Subpart CC	National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries	Not applicable
Subpart DD	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations	Not applicable
Subpart EE	National Emission Standards for Magnetic Tape Manufacturing Operations	Not applicable
Subpart FF	Reserved	N/A
Subpart GG	National Emission Standards for Aerospace Manufacturing and Rework Facilities	Not applicable
Subpart HH	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities (Area Source Applicability)	Not applicable
Subpart II	National Emission Standards for Shipbuilding and Ship Repair (Surface Coating)	Not applicable
Subpart JJ	National Emission Standards for Wood Furniture Manufacturing Operations	Not applicable
Subpart KK	National Emission Standard for the Printing and Publishing Industry	Not applicable
Subpart LL	National Emission Standard for Hazardous Air Pollutants for Primary Aluminum Reduction Plants	Not applicable
Subpart MM	National Emission Standard for Hazardous Air Pollutants for Chemical Recovery Boilers at Kraft, Soda, Sulfite, and Semichemical Pulp Mills	Not applicable
Subpart OO	National Emission Standards for Tanks - Level 1	Not applicable
Subpart PP	National Emission Standards for Containers	Not applicable
Subpart QQ	National Emission Standards for Surface Impoundments	Not applicable
Subpart RR	National Emission Standards for Individual Drain Systems	Not applicable
Subpart SS	National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process	Not applicable
Subpart TT	National Emission Standards for Equipment Leaks - Control Level 1	Not applicable
Subpart UU	National Emission Standards for Equipment Leaks - Control Level 2 Standards	Not applicable
Subpart VV	National Emission Standards for Oil-Water Separators and Organic-Water Separators	Not applicable
Subpart WW	National Emission Standards for Storage Vessels (Tanks) - Control Level 2	Not applicable
Subpart XX	National Emission Standards For Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations	Applicable
Subpart YY	National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards	Not applicable
Subpart ZZ	Reserved	N/A
Subpart AAA	Reserved	N/A
Subpart BBB	Reserved	N/A
Subpart CCC	National Emission Standards for Hazardous Air Pollutants for Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants	Not applicable
Subpart DDD	National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production	Not applicable
Subpart EEE	National Emission Standard for Hazardous Air Pollutants from Hazardous Waste Combustors	Not applicable
Subpart FFF	Reserved	N/A
Subpart GGG	National Emission Standards Pharmaceuticals Production	Not applicable
Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	Not applicable
Subpart III	National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production	Not applicable
Subpart JJJ	National Emission Standard for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins	Not applicable
Subpart KKK	Reserved	N/A
Subpart LLL	National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry	Not applicable
Subpart MMM	National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production	Not applicable
Subpart NNN	National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing	Not applicable
Subpart OOO	National Emission Standards for Hazardous Air Pollutants Emissions: Manufacture of Amino/Phenolic Resins	Not applicable

Table D3 - 40 CFR Part 63 Maximum Achievable Control Technology (MACT) Standards, cont.

Subpart	Description	Applicability
Subpart PPP	National Emission Standards for Hazardous Air Pollutants Emissions for Polyether Polyols Production	Not applicable
Subpart QQQ	National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting	Not applicable
Subpart RRR	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production	Not applicable
Subpart SSS	Reserved	N/A
Subpart TTT	National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting	Not applicable
Subpart UUU	National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: CCU, CRU, and SRU.	Not applicable
Subpart VVV	National Emission Standard for Hazardous Air Pollutants: Publicly Owned Treatment Works	Not applicable
Subpart WWW	Reserved	N/A
Subpart XXX	National Emission Standards for Hazardous Air Pollutants for Ferroalloys Production: Ferromanganese and Silicomanganese	Not applicable
Subpart AAAA	National Emission Standard for Hazardous Air Pollutants: Municipal Solid Waste Landfills	Not applicable
Subpart CCCC	National Emission Standard for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast	Not applicable
Subpart DDDD	National Emission Standard for Hazardous Air Pollutants: Plywood and Composite Wood Products	Applicable
Subpart EEEE	National Emission Standard for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)	Not applicable
Subpart FFFF	National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing	Not applicable
Subpart GGGG	National Emission Standard for Hazardous Air Pollutants: Solvent Extractions for Vegetable Oil Production	Not applicable
Subpart HHHH	National Emission Standard for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production	Not applicable
Subpart IIII	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks	Not applicable
Subpart JJJJ	National Emission Standard for Hazardous Air Pollutants: Paper and Other Web Coating	Not applicable
Subpart KKKK	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Metal Cans	Not applicable
Subpart MMMM	National Emission Standard for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products	Not applicable
Subpart NNNN	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Large Appliances	Not applicable
Subpart OOOO	National Emission Standard for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles	Not applicable
Subpart PPPP	National Emission Standard for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products	Not applicable
Subpart QQQQ	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Wood Building Products	Not applicable
Subpart RRRR	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Metal Furniture	Not applicable
Subpart SSSS	National Emission Standard for Hazardous Air Pollutants: Surface Coating of Metal Coil	Not applicable
Subpart TTTT	National Emission Standard for Hazardous Air Pollutants for Leather Finishing Operations	Not applicable
Subpart UUUU	National Emission Standard for Hazardous Air Pollutants for Cellulose Products Manufacturing	Not applicable
Subpart VVVV	National Emission Standard for Hazardous Air Pollutants for Boat Manufacturing	Not applicable
Subpart WWWW	National Emission Standard for Hazardous Air Pollutants: Reinforced Plastic Composites Production	Not applicable
Subpart XXXX	National Emission Standard for Hazardous Air Pollutants: Rubber Tire Manufacturing	Not applicable
Subpart YYYY	National Emission Standard for Hazardous Air Pollutants for Stationary Combustion Turbines	Not applicable
Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary RICE (Major Source Provisions)	Not applicable
Subpart AAAAA	National Emission Standard for Hazardous Air Pollutants for Lime Manufacturing Plants	Not applicable
Subpart BBBBB	National Emission Standard for Hazardous Air Pollutants for Semiconductor Manufacturing	Not applicable
Subpart CCCCC	National Emission Standard for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks	Not applicable
Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters	Not applicable
Subpart EEEEE	National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries	Not applicable
Subpart FFFFF	National Emission Standard for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities	Not applicable
Subpart GGGGG	National Emission Standard for Hazardous Air Pollutants: Site Remediation	Not applicable
Subpart HHHHH	National Emission Standard for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing	Not applicable
Subpart IIIII	National Emission Standard for Hazardous Air Pollutants: Mercury Emissions From Mercury Cell Chlor-Alkali Plants	Not applicable
Subpart JJJJJ	National Emission Standard for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing	Not applicable
Subpart KKKKK	National Emission Standard for Hazardous Air Pollutants for Clay Ceramics Manufacturing	Not applicable
Subpart LLLLL	National Emission Standard for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing	Not applicable
Subpart MMMMM	National Emission Standard for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations	Not applicable
Subpart NNNNN	National Emission Standard for Hazardous Air Pollutants: Hydrochloric Acid Production	Not applicable
Subparts OOOOO	Reserved	N/A
Subpart PPPPP	National Emission Standard for Hazardous Air Pollutants for Engine Test Cells/Stands	Not applicable
Subpart QQQQQ	National Emission Standard for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities	Not applicable
Subpart RRRRR	National Emission Standard for Hazardous Air Pollutants: Taconite Iron Ore Processing	Not applicable
Subpart SSSSS	National Emission Standard for Hazardous Air Pollutants for Refractory Products Manufacturing	Not applicable
Subpart TTTTT	National Emission Standard for Hazardous Air Pollutants for Primary Magnesium Refining	Not applicable
Subpart UUUUU	Reserved	N/A
Subpart VVVVV	Reserved	N/A
Subpart WWWWV	National Emission Standard for Hospital Ethylenne Oxide Sterilizers	Not applicable
Subparts XXXXX	Reserved	N/A

Table D4 - 40 CFR Part 63 Generally Achievable Control Technology (GACT) Standards

Subpart	Description	Applicability
Subpart A	General Provisions	Not applicable
Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary RICE (Area Source Provisions)	Not applicable
Subpart YYYYY	National Emission Standard for Hazardous Air Pollutants for Area/Sources: Electric Arc Furnace Steelmaking Facilities	Not applicable
Subpart ZZZZZ	National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources	Not applicable
Subparts AAAAAA	Reserved	N/A
Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals	Not applicable
Subpart CCCCCC	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities	Not applicable
Subpart DDDDDD	National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources	Not applicable
Subpart EEEEEE	National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting Area Sources	Not applicable
Subpart FFFFFF	National Emission Standards for Hazardous Air Pollutants for Secondary Copper Smelting Area Sources	Not applicable
Subpart GGGGGG	National Emission Standards for Hazardous Air Pollutants for Primary Nonferrous Metals Area Sources (Zinc, Cadmium, and Beryllium)	Not applicable
Subpart HHHHHH	National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations	Not applicable
Subparts IIIIII	Reserved	N/A
Subparts JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	Not applicable
Subparts KKKKKK	Reserved	N/A
Subpart LLLLLL	National Emission Standards for Hazardous Air Pollutants for Acrylic and Modacrylic Fibers Production Area Sources	Not applicable
Subpart MMMMMM	National Emission Standards for Hazardous Air Pollutants for Carbon Black Production Area Sources	Not applicable
Subpart NNNNNN	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Chromium Compounds	Not applicable
Subpart OOOOOO	National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources	Not applicable
Subpart PPPPPP	National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources	Not applicable
Subpart QQQQQQ	National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources	Not applicable
Subpart RRRRRR	National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing Area Sources	Not applicable
Subpart SSSSSS	National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources	Not applicable
Subpart TTTTTT	National Emission Standards for Hazardous Air Pollutants for Secondary Nonferrous Metals Processing Area Sources	Not applicable
Subparts UUUUUU	Reserved	N/A
Subpart VVVVVV	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources	Not applicable
Subpart WWWWWW	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations	Not applicable
Subpart XXXXXX	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Sources	Not applicable
Subpart YYYYYY	National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities	Not applicable
Subpart ZZZZZZ	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Aluminum, Copper and Other Foundries	Not applicable
Subpart AAAAAAA	National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing	Not applicable
Subpart BBBBBBB	National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry	Not applicable
Subpart CCCCCCC	National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing	Not applicable
Subpart DDDDDDD	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Prepared Feeds Manufacturing	Not applicable
Subpart EEEEEEE	National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category	Not applicable
Subpart HHHHHHH	National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production	Not applicable

Tabel D5 - GRAQC 391-3-1-.02(2) Emission Limitations and Standards.

Standard/Section	*Applicability*
(b) Visible Emissions.	*Applicable*
(c) Incinerators.	*Not applicable*
(d) Fuel Burning Equipment.	*Not applicable*
(e) Particulate Emission from Manufacturing Processes.	*Applicable*
(f) Normal Superphosphate Manufacturing Facilities.	*Not applicable*
(g) Sulfur Dioxide.	*Applicable*
(h) Portland Cement Plants.	*Not applicable*
(i) Nitric Acid Plants.	*Not applicable*
(j) Sulfuric Acid Plants.	*Not applicable*
(k) Particulate Emission from Asphaltic Concrete Hot Mix Plants.	*Not applicable*
(l) [reserved]	*Not applicable*
(m) Repealed.	*Not applicable*
(n) Fugitive Dust.	*Applicable*
(o) [reserved]	*Not applicable*
(p) Particulate Emissions from Kaolin and Fuller's Earth Processes.	*Not applicable*
(q) Particulate Emissions from Cotton Gins.	*Not applicable*
(r) Particulate Emissions from Granular and Mixed Fertilizer Manufacturing Units.	*Not applicable*
(s) Nitrogen Oxides. (Repealed)	*Not applicable*
(t) VOC Emissions from Automobile and Light-Duty Truck Manufacturing.	*Not applicable*
(u) VOC Emissions from Can Coating.	*Not applicable*
(v) VOC Emissions from Coil Coating.	*Not applicable*
(w) VOC Emissions from Paper Coating.	*Not applicable*
(x) VOC Emissions from Fabric and Vinyl Coating.	*Not applicable*
(y) VOC Emissions from Metal Furniture Coating.	*Not applicable*
(z) VOC Emissions from Large Appliance Surface Coating.	*Not applicable*
(aa) VOC Emissions from Wire Coating.	*Not applicable*
(bb) Petroleum Liquid Storage.	*Not applicable*
(cc) Bulk Gasoline Terminals.	*Not applicable*
(dd) Cutback Asphalt.	*Not applicable*
(ee) Petroleum Refinery.	*Not applicable*
(ff) Solvent Metal Cleaning.	*Not applicable*
(gg) Kraft Pulp Mills.	*Not applicable*
(hh) Petroleum Refinery Equipment Leaks.	*Not applicable*
(ii) VOC Emissions from Surface Coating of Miscellaneous Metal Parts and Products.	*Not applicable*
(jj) VOC Emissions from Surface Coating of Flat Wood Paneling.	*Not applicable*
(kk) VOC Emissions from Synthesized Pharmaceutical Manufacturing.	*Not applicable*
(ll) VOC Emissions from the Manufacture of Pneumatic Rubber Tires.	*Not applicable*
(mm) VOC Emissions from Graphic Arts Systems.	*Not applicable*
(nn) VOC Emissions from External Floating Roof Tanks.	*Not applicable*
(oo) Fiberglass Insulation Manufacturing Plants.	*Not applicable*
(pp) Bulk Gasoline Plants.	*Not applicable*
(qq) VOC Emissions from Large Petroleum Dry Cleaners.	*Not applicable*
(rr) Gasoline Dispensing Facility - Stage I.	*Not applicable*
(ss) Gasoline Transport Vehicles and Vapor Collection Systems.	*Not applicable*
(tt) VOC Emissions from Major Sources.	*Not applicable*
(uu) Visibility Protection.	*Not applicable*
(vv) Volatile Organic Liquid Handling and Storage.	*Not applicable*
(ww) Reserved.	*Not applicable*
(xx) Reserved.	*Not applicable*
(yy) Emissions of Nitrogen Oxides from Major Sources.	*Not applicable*
(zz) Gasoline Dispensing Facilities--Stage II.	*Not applicable*
(aaa) [reserved]	*Not applicable*
(bbb) [reserved]	*Not applicable*
(ccc) VOC Emissions from Bulk Mixing Tanks.	*Not applicable*
(ddd) VOC Emissions from Offset Lithography and Letterpress.	*Not applicable*
(eee) VOC Emissions from Expanded Polystyrene Products Manufacturing.	*Not applicable*
(fff) Particulate Matter Emissions from Yarn Spinning Operations.	*Not applicable*
(ggg) Existing Municipal Solid Waste Landfills.	*Not applicable*
(hhh) Wood Furniture Finishing and Cleaning Operations.	*Not applicable*
(iii) Hospital/Medical/Infectious Waste Incinerators Constructed on or Before June 20, 1996.	*Not applicable*
(jjj) NOX Emissions from Electric Utility Steam Generating Units.	*Not applicable*
(kkk) VOC Emissions from Aerospace Manufacturing and Rework Facilities.	*Not applicable*
(lll) NOX Emissions From Fuel-Burning Equipment.	*Not applicable*
(mmm) NOX Emissions from Stationary Gas Turbines and Stationary Engines	*Not applicable*
(nnn) NOX Emissions from Large Stationary Gas Turbines.	*Not applicable*
(ooo) Reserved.	*Not applicable*

Tabel D5 - GRAQC 391-3-1-.02(2) Emission Limitations and Standards, cont.

Standard/Section	*Applicability*
(ppp) CISW Incineration Units Constructed On or Before June 4, 2010.	*Not applicable*
(qqq) VOC Emissions from Extruded Polystyrene Products Utilizing a Blowing Agent.	*Not applicable*
(rrr) NOx Emissions from Small Fuel-Burning Equipment.	*Not applicable*
(sss) Multipollutant Control for Electric Utility Steam Generating Units.	*Not applicable*
(ttt) [reserved]	*Not applicable*
(uuu) SO2 Emissions from Electric Utility Steam Generating Units.	*Not applicable*
(vvv) VOC Emissions from Surface Coating of Miscellaneous Plastic Parts and Products.	*Not applicable*
(www) Sewage Sludge Incineration Units Constructed On or Before October 14, 2010.	*Not applicable*
(xxx) Reserved.	*Not applicable*
(yyy) VOC Emissions from the Use of Miscellaneous Industrial Adhesives.	*Not applicable*
(zzz) VOC Emissions from the Fiberglass Boat Manufacturing.	*Not applicable*
(aaaa) Industrial Cleaning Solvents.	*Not applicable*

APPENDIX E
RBLC SEARCH RESULTS

Faircloth Forest Products
RBLC Lumber Kiln
VOC BACT Summary

Table E1. RBLC Search Results Summary.

Facility Information	RBLC ID	Description	Process Type	Throughput	Units	Pollutant	BACT	Limit	Units
WEYERHAEUSER NR COMPANY	MS-0094	Lumber Drying Kiln	30.800	325,000	MBF/year	VOC	Proper kiln design and operation	4.52	LB VOC/MBF
WEST FRASER, INC	AR-0169	Steam-heated kiln	30.800	70,000	MBF/year	VOC	Proper kiln design and operation	3.80	LB VOC/MBF
VICKSBURG FOREST PRODUCTS, LLC	MS-0093	Lumber Drying	30.800	164,114	MBF/year	VOC	Proper kiln design and operation	4.43	LB VOC/MBF
LUMBER MANUFACTURING PLANT	TX-0870	Lumber Kilns	30.800	188,000	MBF/year	VOC	Proper kiln design and operation	5.49	LB VOC/MBF
GP WOOD PRODUCTS SOUTH LLC	AR-0164	#1 and #3 Lumber Kiln	30.800	172,000	MBF/year	VOC	Proper kiln design and operation	5.78	LB VOC/MBF
HOLDEN WOOD PRODUCTS MILL	LA-0363	Lumber Drying Kilns A and B	30.800	140,000	MBF/year	VOC	Proper kiln design and operation	4.33	LB VOC/MBF
IDABEL SAWMILL	OK-0179	LUMBER KILN	30.800	108,000	MBF/year	VOC	Proper kiln design and operation	3.88	LB VOC/MBF
ST. MARIES COMPLEX	ID-0022	Batch-type lumber dry kiln	30.800	68,133	MBF/year	VOC	Proper kiln design and operation	1.47	LB VOC/MBF
CANFOR SOUTHERN PINE	SC-0192	Batch Lumber Kilns	30.800	--	MBF/year	VOC	Proper kiln design and operation	4.20	LB VOC/MBF
BOGALUSA SAWMILL	LA-0347	Lumber kilns (2)	30.800	520,000	MBF/year	VOC	Proper kiln design and operation	--	LB VOC/MBF
LUMBER MILL	TX-0856	Direct-Fired Kiln No. 3	30.800	148,000	MBF/year	VOC	Proper kiln design and operation	4.24	LB VOC/MBF
GEORGIA-PACIFIC WOOD PRODUCTS	SC-0186	Lumber Drying Kiln 4	30.800	88,000	MBF/year	VOC	Proper kiln design and operation	5.72	LB VOC/MBF
POTLATCHDELTIC LAND AND LUMBER	AR-0158	Continuous Drying Kilns	30.800	300,000	MBF/year	VOC	Proper kiln design and operation	3.50	LB VOC/MBF
JOYCE MILL	LA-0335	Lumber kilns	30.800	300,000	MBF/year	VOC	Proper kiln design and operation	4.20	LB VOC/MBF
CANFOR SOUTHERN PINE	SC-0185	Lumber Drying Kiln 7	30.800	110,000	MBF/year	VOC	Proper kiln design and operation	5.82	LB VOC/MBF
ANTHONY TIMBERLANDS, INC	AR-0154	Drying Kiln	30.800	66,667	MBF/year	VOC	Proper kiln design and operation	4.84	LB VOC/MBF
INTERFOR U.S. INC	AR-0152	Kiln #2	30.800	--	MBF/year	VOC	Proper kiln design and operation	3.80	LB VOC/MBF
LUMBER MILL	TX-0842	Kilns	30.800	25,000	MBF/year	VOC	Proper kiln design and operation	3.38	LB VOC/MBF
URANIA SAWMILL	LA-0338	Lumber Drying Kilns	30.800	--	MBF/year	VOC	Proper kiln design and operation	--	LB VOC/MBF
NSLC - DARLINGTON	SC-0184	Lumber Drying Kiln 7	30.800	80,000	MBF/year	VOC	Proper kiln design and operation	4.20	LB VOC/MBF
CADDO RIVER LLC	AR-0148	Dual Path Kiln # 3	30.800	185,000	MBF/year	VOC	Proper kiln design and operation	3.80	LB VOC/MBF
TALLADEGA SAWMILL	AL-0318	Dry Kiln 1	30.800	120,000	MBF/year	VOC	Proper kiln design and operation	5.49	LB VOC/MBF
TALLADEGA SAWMILL	AL-0318	Dry Kiln 2	30.800	120,000	MBF/year	VOC	Proper kiln design and operation	5.49	LB VOC/MBF
TALLADEGA SAWMILL	AL-0318	Dry Kiln 3	30.800	120,000	MBF/year	VOC	Proper kiln design and operation	5.49	LB VOC/MBF
RESOLUTE FP US INC.	SC-0181	CDK1, CDK2, CDK3	30.800	104,000	MBF/year	VOC	Proper kiln design and operation	5.82	LB VOC/MBF
ANTHONY FOREST PRODUCTS COMPANY	AR-0147	Dual Path Kiln #3	30.800	--	MBF/year	VOC	Proper kiln design and operation	3.80	LB VOC/MBF
WEST FRASER, INC.	AR-0146	Lumber Kilns	30.800	--	MBF/year	VOC	Proper kiln design and operation	3.80	LB VOC/MBF
FULTON SAWMILL	AL-0310	LUMBER DRY KILN	30.800	100,000	MBF/year	VOC	Proper kiln design and operation	4.00	LB VOC/MBF
PERRY MILL	FL-0365	Lumber Drying Kiln No. 5	30.800	50,000	MBF/year	VOC	Proper kiln design and operation	3.50	LB VOC/MBF

APPENDIX F
FORMS

State of Georgia
Department of Natural Resources
Environmental Protection Division
Air Protection Branch

Stationary Source Permitting Program
4244 International Parkway, Suite 120
Atlanta, Georgia 30354
404/363-7000

SIP AIR PERMIT APPLICATION

EPD Use Only

Date Received: _____ Application No. _____

FORM 1.00: GENERAL INFORMATION

1. Facility Information

Facility Name: Faircloth Forest Products

AIRS No. (if known): 04-13- 107 - 00032

Facility Location: Street: 201 Pinetree Trail

City: Swainsboro Georgia Zip: 30401 County: Emanuel

Is this facility a "small business" as defined in the instructions? Yes: ☐ No: ☒

2. Facility Coordinates

Latitude: 32° 31' 29" NORTH Longitude: 82° 19' 52" WEST

UTM Coordinates: 374986 EAST 3599380.5 NORTH ZONE 17

3. Facility Owner

Name of Owner: Faircloth Forest Products

Owner Address Street: 201 Pinetree Trail

City: Swainsboro State: GA Zip: 30401

4. Permitting Contact and Mailing Address

Contact Person: Jeremy Faircloth Title: Vice President

Telephone No.: 912-562-3447 Ext. _____ Fax No.: 478-562-4492

Email Address: ljr04@yahoo.com

Mailing Address: Same as: Facility Location: ☐ Owner Address: ☒ Other: ☐

If Other: Street Address: _____

City: _____ State: _____ Zip: _____

5. Authorized Official

Name: Jeremy Faircloth Title: Vice President

Address of Official Street: 201 Pinetree Trail

City: Swainsboro State: GA Zip: 30401

This application is submitted in accordance with the provisions of the Georgia Rules for Air Quality Control and, to the best of my knowledge, is complete and correct.

Signature: _____ Date: 2-28-22

6. *Reason for Application: (Check all that apply)*

☐ *New Facility (to be constructed)*

☒ *Existing Facility (modification application)*

☒ *Permit to Construct*

☐ *Permit to Operate*

☐ *Change of Location*

☐ *Permit to Modify Existing Equipment:* *Affected Permit No.:* _____

☐ *Revision of Data Submitted in an Earlier Application*

Application No.: _____

Date of Original Submittal: _____

7. *Permitting Exemption Activities (for permitted facilities only):*

Have any exempt modifications based on emission level per Georgia Rule 391-3-1-.03(6)(i)(3) been performed at the facility that have not been previously incorporated in a permit?

☒ *No* ☐ *Yes, please fill out the SIP Exemption Attachment (See Instructions for the attachment download)*

8. *Has assistance been provided to you for any part of this application?*

☐ *No* ☐ *Yes, SBAP* ☒ *Yes, a consultant has been employed or will be employed.*

If yes, please provide the following information:

Name of Consulting Company: Todd Cloud

Name of Contact: Todd Cloud

Telephone No.: 678-993-7278 *Fax No.:* _____

Email Address: toddcloud@gmail.com

Mailing Address: *Street:* 707 Hammond Dr

City: Woodstock *State:* GA *Zip:* 30188

Describe the Consultant's Involvement:

Consulting

9. *Submitted Application Forms: Select only the necessary forms for the facility application that will be submitted.*

No. of Forms	Form
1	2.00 Emission Unit List
1	2.01 Boilers and Fuel Burning Equipment
	2.02 Storage Tank Physical Data
	2.03 Printing Operations
	2.04 Surface Coating Operations
	2.05 Waste Incinerators (solid/liquid waste destruction)
1	2.06 Manufacturing and Operational Data
1	3.00 Air Pollution Control Devices (APCD)
	3.01 Scrubbers
	3.02 Baghouses & Other Filter Collectors
	3.03 Electrostatic Precipitators
1	4.00 Emissions Data
	5.00 Monitoring Information
	6.00 Fugitive Emission Sources
	7.00 Air Modeling Information

10. *Construction or Modification Date*

Estimated Start Date: ASAP

11. *If confidential information is being submitted in this application, were the guidelines followed in the "Procedures for Requesting that Submitted Information be treated as Confidential"?*

☐ *No* ☐ *Yes*

12. *New Facility Emissions Summary*

Criteria Pollutant	*New Facility*	
	Potential (tpy)	*Actual (tpy)*
Carbon monoxide (CO)		
Nitrogen oxides (NOx)		
Particulate Matter (PM) (filterable only)		
PM <10 microns (PM10)		
PM <2.5 microns (PM2.5)		
Sulfur dioxide (SO2)		
Volatile Organic Compounds (VOC)		
Greenhouse Gases (GHG) (in CO2e)		
Total Hazardous Air Pollutants (HAP)		
Individual HAP Listed Below:		

13. *Existing Facility Emissions Summary*

Criteria Pollutant	*Current Facility*		*After Modification*	
	Potential (tpy)	*Actual (tpy)*	*Potential (tpy)*	*Actual (tpy)*
Carbon monoxide (CO)	*20.0*		*37.3*	
Nitrogen oxides (NOx)	*12.7*		*23.7*	
Particulate Matter (PM) (filterable only)	*32.1*		*55.3*	
PM < 10 microns (PM10)	*17.6*		*30.6*	
PM < 2.5 microns (PM2.5)	*13.8*		*23.5*	
Sulfur dioxide (SO_2)	*4.38*		*8.76*	
Volatile Organic Compounds (VOC)	*184*		*344*	
Greenhouse Gases (GHG) (in CO2e)	*36,714*		*73,428*	
Total Hazardous Air Pollutants (HAP)	*12.0*		*22.4*	
Individual HAP Listed Below:				
Acetaldehyde	*2.07*		*3.87*	
Acrolein	*0.28*		*0.52*	
Formaldehyde	*1.78*		*3.32*	
Methanol	*7.41*		*13.8*	
Phenol	*0.47*		*0.89*	

14. 4-Digit Facility Identification Code:

SIC Code:	*2421*	*SIC Description:*	*Sawmills and Planing Mills, General*
NAICS Code:	*32113*	*NAICS Description:*	*Sawmills*

15. Description of general production process and operation for which a permit is being requested. If necessary, attach additional sheets to give an adequate description. Include layout drawings, as necessary, to describe each process. References should be made to source codes used in the application.

Faircloth Forest Products proposes to construct and operate a second direct-fired dry kiln (DK02) at the existing sawmill operations located at 201 Pinetree Trail, Swainsboro, Georgia 30401 (Emanuel County). Air emissions from the site were initially authorized by Construction Permit 2421-107-0032-E-01-0 (issued November 17, 2017) followed by Title V Operating Permit 2421-107-0032-V-02-0 (issued September 21, 2018). The applicant herein seeks agency authorization to construct and operate a second dry kiln (DK02) and ancillary operations in accordance with Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(7) and 40 Code of Federal Regulations (CFR) 52.21.

16. Additional information provided in attachments as listed below:

Attachment A -	*FACILITY DIAGRAMS*
Attachment B -	*PROCESS FLOW DIAGRAM*
Attachment C -	*EMISSION ESTIMATES*
Attachment D -	*REGULATORY REVIEW*
Attachment E -	*RBLC SEARCH RESULTS*
Attachment F -	*FORMS*

17. Additional Information: Unless previously submitted, include the following two items:

☒ *Plot plan/map of facility location (or date of previous submittal):* _____

☒ *Flow Diagram (or date of previous submittal):* _____

18. Other Environmental Permitting Needs:

Will this facility/modification trigger the need for environmental permits/approvals (other than air) such as Hazardous Waste Generation, Solid Waste Handling, Water withdrawal, water discharge, SWPPP, mining, landfill, etc.?

☒ *No* ☐ *Yes, please list below:*

19. List requested permit limits including synthetic minor (SM) limits.

92 MMBF/yr on Kiln 1

80 MMBF/yr on Kiln 2

20. Effective March 1, 2019, permit application fees will be assessed. The fee amount varies based on type of permit application. Application acknowledgement emails will be sent to the current registered fee contact in the GECO system. If fee contacts have changed, please list that below:

Fee Contact name:	*Todd Cloud*
Fee Contact email address:	*toddcloud@gmail.com*
Fee Contact phone number	*678.993.7278*

Fee invoices will be created through the GECO system shortly after the application is received. It is the applicant's responsibility to access the facility GECO account, generate the fee invoice, and submit payment within 10 days after notification.

Facility Name: Faircloth Forest Products *Date of Application:* February 2022

FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	*Name*	*Manufacturer and Model Number*	*Description*
DK02	*Dry Kiln 2*	*TBD*	*Direct-fired continuous dry kiln with drying capacity of 80 MMBF/yr and associated 40 MMBtu/hr burner.*
CD01	*Cyclone 1*	*TBD*	*Cyclone to pneumatically convey dry shavings from the Reman Mill*

Facility Name: Faircloth Forest Products *Date of Application:* February 2022

FORM 2.01 – BOILERS AND FUEL BURNING EQUIPMENT

Emission Unit ID	*Type of Burner*	*Type of Draft*	*Design Capacity of Unit (MMBtu/hr Input)*	*Percent Excess Air*	*Dates*		*Date & Description of Last Modification*
					Construction	*Installation*	
DK02	*TBD*	*Forced*	*40*	*15*	*TBD*	*TBD*	*N/A*

Facility Name: Faircloth Forest Products *Date of Application:* February 2022

FORM 2.01 – FUEL DATA

Emission Unit ID	Fuel Type	Potential Annual Consumption				Hourly Consumption		Heat Content		Percent Sulfur		Percent Ash in Solid Fuel	
		Total Quantity		Percent Use by Season									
		Amount	Units	Ozone Season May 1 - Sept 30	Non-ozone Season Oct 1 - Apr 30	Max.	Avg.	Min.	Avg.	Max.	Avg.	Max.	Avg.
DK02	Bark	38,933	ton/yr	42	58	4.444		4,500		< 1		< 1	

FORM 2.01 – FUEL SUPPLIER

Fuel Type	Name of Supplier	Phone Number	Supplier Location			
			Address	City	State	Zip
Bark	Generated on site					

Facility Name: Faircloth Forest Products *Date of Application:* February 2022

FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 *hours/day* 7 *days/week* 52 *weeks/yr*

Additional Data Attached? ☒ *- No* ☐ *- Yes, please include the attachment in list on Form 1.00, Item 16.*

Seasonal and/or Peak Operating Periods: N/A

Dates of Annually Occurring Shutdowns: N/A

PRODUCTION INPUT FACTORS

Emission Unit ID	*Emission Unit Name*	*Const. Date*	*Input Raw Material(s)*	*Annual Input*	*Hourly Process Input Rate*		
					Design	*Normal*	*Maximum*
DK02	*Dry Kiln 2*	*TBD*	*Lumber*	*80 MMBF*			
CD01	*Cyclone 2*	*TBD*	*Shavings*	*13,545 tons*			

PRODUCTS OF MANUFACTURING

Emission Unit ID	*Description of Product*	*Production Schedule*		*Hourly Production Rate (Give units: e.g. lb/hr, ton/hr)*			
		Tons/yr	*Hr/yr*	*Design*	*Normal*	*Maximum*	*Units*
DK02	*Dried Lumber*	*126,000*	*8,760*				
CD01	*Shavings*	*13,545*	*8,760*				

Facility Name: *Faircloth Forest Products* *Date of Application:* *February 2022*

Form 3.00 – AIR POLLUTION CONTROL DEVICES - PART A: GENERAL EQUIPMENT INFORMATION

APCD Unit ID	*Emission Unit ID*	*APCD Type (Baghouse, ESP, Scrubber etc)*	*Date Installed*	*Make & Model Number (Attach Mfg. Specifications & Literature)*	*Unit Modified from Mfg Specifications?*	*Gas Temp. °F*		*Inlet Gas Flow Rate (acfm)*
						Inlet	*Outlet*	
CD01	*N/A*	*Cyclone*	*TBD*	*TBD*	*No*	*Ambient*		*40,000*

Facility Name: *Faircloth Forest Products* *Date of Application:* *February 2022*

Form 3.00 – AIR POLLUTION CONTROL DEVICES – PART B: EMISSION INFORMATION

APCD Unit ID	*Pollutants Controlled*	*Percent Control Efficiency*		*Inlet Stream To APCD*		*Exit Stream From APCD*		*Pressure Drop Across Unit (Inches of water)*
		Design	*Actual*	*lb/hr*	*Method of Determination*	*lb/hr*	*Method of Determination*	
CD01	*PM*					*3.43*	*See Appendix C*	*1 - 8*
	PM10					*1.71*		
	PM2.5							

Facility Name: Faircloth Forest Products *Date of Application:* February 2022

FORM 4.00 – EMISSION INFORMATION

Emission Unit ID	*Air Pollution Control Device ID*	*Stack ID*	*Pollutant Emitted*	*Emission Rates*				
				Hourly Actual Emissions (lb/hr)	*Hourly Potential Emissions (lb/hr)*	*Actual Annual Emission (tpy)*	*Potential Annual Emission (tpy)*	*Method of Determination*
DK02	*N/A*	*Fugitive*	*CO*				*17.4*	*See Appendix C*
			NOX				*11.0*	
			PM				*5.60*	
			PM10				*4.16*	
			PM2.5				*3.96*	
			SO2				*4.38*	
			VOC				*160*	
			ACET				*1.80*	
			ACRO				*0.24*	
			FORM				*1.54*	
			MEOH				*6.44*	
			PHEN				*0.41*	
			CO2e				*36,714*	
CD01	*CD01*	*ST01*	*PM*		*3.43*		*5.60*	
			PM10		*1.71*		*4.16*	
			PM2.5					