DRAFT/PROPOSED

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **December 6, 2021**

TO: Phillip Fielder, P.E., Chief Engineer

THROUGH: Rick Groshong, Environmental Programs Mgr., Compliance & Enforcement

THROUGH: Eric L. Milligan, P.E., Engineering Manager, Engineering Section

THROUGH: Jian Yue, P.E., New Source Permits Section

FROM: Junru Wang, E.I., Existing Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2017-0446-C (M-2)**
Teal-Jones Lumber, LLC (SIC 2421/NAICS 321113).
Antlers Sawmill (Facility ID: 5096)
Antlers, Pushmataha County, Oklahoma
Section 26, Township 4S, Range 16E
Latitude 34.18573°, Longitude -95.59053°
Directions: From the intersection of SH 3 (W Main St.) and US HWY 271 (W C St.) in Antlers, OK, travel south on US HWY 271 for 3.1 miles, turn east on New Hope Rd., (marked Teal-Jones) and travel for 1.9 miles, entrance will be on south (right) side of road.

SECTION I. INTRODUCTION

Teal-Jones Lumber, LLC (Teal-Jones or the applicant) has applied for a construction permit to modify the current Part 70 operating permit at their existing sawmill located near Antlers, Oklahoma. The facility is currently operating under Permit No. 2017-0446-TV, issued on February 12, 2020.

The application was submitted to obtain authorization to replace the two (2) existing wood fired boilers (B-1 and B-2) with two (2) natural gas-fired boilers (NGB-1 and NGB-2) and to add two (2) green sawdust dryers (SD-1 and SD-2) in order to convert byproduct potentially requiring disposal into a useful product. The requested changes are discussed in detail in Section IV of the Memorandum. The applicant has requested to process the construction permit through the Enhanced NSR process.

The facility is a PSD major source for VOC and a major source of HAPs.

SECTION II. PROCESS DESCRIPTION

The facility manufactures dimensional lumber and timbers (softwood). The emissions from the sawmill are based on a dried lumber production rate of 190.62 million board-feet (MMBf) of

lumber per year. The emission sources at the facility include: Log Debarking, Sawmill Operations including chipping, Natural Gas-Fired Boilers, Indirect-Fired and Direct-Fired Lumber Drying Kilns, Planer Mill Operations, Byproduct Material Transfer and Storage, Sawdust Drying, Fuel Storage, and Haul Roads.

The lumber drying kilns are the production bottleneck for the facility and operate on a continuous basis while the other operations, which have a greater production capacity, operate on an intermittent basis. A pertinent description of each process, operating hours, process rates, and any air pollution control equipment are addressed below.

Log Debarker
Incoming logs are typically stored on-site prior to processing. Logs are debarked using a ring debarker (LD-1) within a partially enclosed building. The end product of this process is debarked green logs which are routed to the sawmill. A maximum annual throughput of 781,542 tons of logs per year is based on the facility-wide production of 190.62 MMBf per year and a pre-debarked lumber conversion factor of 8.2 pounds per board feet (PBf).

Bark is produced as a byproduct from this operation and is mechanically conveyed to a bark storage pile (SP-2) where it is shipped off-site via truck. Annual bark production throughput of 57,186 tons of bark per year is estimated.

Sawmill
Debarked logs are sent to the sawmill (SM-1) where the logs are routed through a series of saws to produce rough, green lumber. The facility performs sawing within a building and the saws within the building are partially enclosed. A maximum annual throughput of 724,356 tons of logs per year is based on the facility-wide production of 190.62 MMBf per year and a debarked lumber conversion factor of 7.6 PBf.

Byproducts from this operation include trim and scrap lumber which is routed to the sawmill chippers (C-1), and sawdust which is mechanically conveyed to the sawdust storage pile (SP-3).

The green sawdust is then mechanically conveyed to the sawdust dryers (SD-1 and SD-2). Some green sawdust or chips may pass through a hammer mill prior to drying. The sawdust dryers utilize direct fired sawdust burners and dry the green sawdust from approximately 53% moisture down to approximately 12% moisture. After drying, the sawdust passes through a dedicated product recovery cyclone for transfer to the truck loadout for shipping off-site. Any surplus sawdust that is not dried will be stored or shipped off-site as green sawdust. Green sawdust generation is estimated to be 66,717 tons of sawdust per year. The facility will produce no more than 16,750 oven dried tons of sawdust through the dryers per year. Annual trim/scrap lumber sent to the sawmill chipper is estimated to be 304,992 tons per year.

Sawmill Chippers
The trim and scrap lumber from the sawmill operation (SM-1) are mechanically conveyed to two partially enclosed chippers (C-1). The chippers process the scrap lumber and trim into green chips which are then conveyed to either the chip storage bin (CB-1) or the chip overflow storage pile (SP-1). The chips are then shipped off-site.

Natural Gas-Fired Steam Generating Boilers
The two (2) natural gas-fired boilers (NGB-1 and NGB-2) will combust pipeline quality natural gas to create steam that is used to heat the batch lumber kilns which dry rough, green lumber. The boilers are each 50.4 MMBTUH, 1,200 HP, 150 PSI Hurst units. The boilers are subject to 40 CFR Part 63, Subpart DDDDD and 40 CFR Part 60, Subpart Dc.

Batch Lumber Drying Kilns
The rough, green boards from the sawmill operation (SM-1) are sorted and stacked before being dried in the batch lumber drying kilns (K-1, K-2, K-3, and K-4). The kilns are indirectly heated via steam produced from the two (2) natural gas-fired boilers. After drying, the rough lumber is processed further in the planer mill (PM-1) or sold.

Continuous Lumber Drying Kiln
The continuous lumber drying kiln is a natural gas direct-fired continuous kiln (CDK-1) which is used to dry lumber or timbers in addition to the batch kilns.

Planer Mill
From the lumber drying kilns, the rough-dry product is sent to be finished in the Planer Mill (PM-1) or sent to be stored in the lumber storage/shipping area. A maximum annual total production of 251,618 tons of dried lumber per year is possible based on 190.62 MMBf per year with a (post-kiln) lumber conversion factor of 2.64 PBf.

The planers and saws in the Planer Mill are enclosed and under negative pressure. Planer trim is mechanically routed to the planer hog for processing which is also enclosed and under negative pressure. The hogged planer trim and planer shavings are pneumatically conveyed from the Planer Mill via cyclone through an air seal into the shavings storage bin (SB-1). The shavings are then shipped off-site.

Material Storage Piles
Byproducts from the debarking and sawmill processes, to include chip overflow, bark, and sawdust are conveyed to storage piles (SP-1, SP-2, and SP-3, respectively). Byproducts are then loaded into vehicles to be transported off-site. Sawdust from the sawdust storage pile (SP-3) may be routed for drying in the sawdust dryers (SD-1 and SD-2).

Material Storage Bins
Byproducts from the sawmill and planer mill, to include shavings and chips are conveyed to storage bins (SB-1 and CB-1, respectively). Byproducts are then loaded into vehicles to be transported off-site.

Haul Roads
All raw materials, byproducts, and finished products are transported by truck over the mill's haul roads.

Gasoline Storage Tank
The facility has one (1) 500-gallon gasoline tank (GT-1) on-site for vehicle and equipment use. The gasoline tank is subject to OAC 252:100-37-5.

Insignificant Activity Storage Tanks
The facility utilizes several diesel tanks on-site to fuel on-site vehicles. The throughput of the tanks would never exceed 2,175 gallons per day, averaged over a 30-day period, these tanks qualify as insignificant activities in accordance with OAC 252:100 Appendix I. Records are maintained to demonstrate their insignificance. The facility utilizes various petroleum fluid storage tanks with capacities less than 10,000 gallons and constituent maximum true vapor pressures less or equal to 1.0 psia on-site to include used oil tanks, transformer oil tanks, lube oil drums, lube oil totes, hydraulic fluid tanks and saw glide oil tanks. Therefore, these tanks qualify as insignificant activities in accordance with OAC 252:100 Appendix I. Records are maintained to demonstrate their insignificance.

SECTION III. PERMIT HISTORY

Permit No.	Date Issued	Description
2001-215-C	12/27/2001	Initial minor source construction permit for a new facility.
2001-215-O	6/15/2004	Initial minor source operating permit.
2017-0446-C	1/23/2018	Major source construction permit to authorize the construction of two (2) lumber drying kilns for the purposes of increasing the production capacity at the facility.
2017-0446-C (M-1)	5/15/2019	Major source construction permit to authorize the construction of a 100 MMBf per year direct-fired continuous lumber drying kiln.
2017-0446-TV	2/12/2020	Initial Title V Operating Permit.

SECTION IV. REQUESTED CHANGES

The proposed project will decommission the existing wood-waste fired boilers (B-1 and B-2) and leave them inoperable. They may be removed from the site or may remain in place until sold or dismantled. The facility will install two (2) new Hurst natural gas-fired boilers (proposed NGB-1 and NGB-2). The boilers will combust pipeline quality natural gas to create steam for use in heating the existing batch lumber kilns (K-1, K-2, K-3, and K-4) to dry green lumber. The boilers are each 50.4 MMBTUH, 1,200 HP, 150 PSI units.

The emissions from the truck traffic (HR-1) will be updated based on this change. Previously, the amount hauled of 32,194 TPY reflected the maximum amount of sawdust generated, 66,717 TPY, less the amount of sawdust to be burned within the existing wood fired boilers, 34,523 TPY. This emissions estimate has been corrected to increase the hauled sawdust from 32,194 TPY to assuming the full 66,717 TPY of sawdust could potentially be hauled. This is a conservative estimate as the reduction of water weight in the dried sawdust, from 53% to 12%, was not considered.

The project also includes installation of two (2) green sawdust dryers (proposed SD-1 and SD-2). Each triple pass rotary drum dryer is a direct fired unit that burns sawdust as fuel to generate dried sawdust as a finished product. Sawdust Dryer No. 1 (SD-1) is a 10’ x 32’ unit equipped with a 20 MMBTUH burner and Sawdust Dryer No. 2 (SD-2) is 8’ x 24’ with a 12 MMBTUH burner. The units are being relocated from another facility and installed upon permit application approval. The

units will dry the green sawdust generated by existing sawmill operations and then the dried product will be loaded into trucks for shipping off-site. The green sawdust is currently generated and handled for shipping off-site. The drying process will simply improve the quality of the sawdust by reducing the moisture content which opens a sale outlet for this byproduct. Teal-Jones proposes a cap on the sawdust dryer production in order to avoid triggering PSD permitting. Since dry sawdust was previously not handled on-site, new emission point, Dried Sawdust (DS-1), will be added to EUG4.

SECTION V. EQUIPMENT

EUG 1 Debarking and Chipping Operations

EU	Point	Description	Date of Construction
LD	1	Log Debarker	2002
C	1	Sawmill Chipper (x2)	2002

EUG 1a Sawmill and Planer Mill Operations

EU	Point	Description	Date of Construction
SM	1	Sawmill [1]	2002
PM	1	Planer Mill [2]	2002

[1] - Performed inside an enclosed building.

[2] - Controlled via cyclone rated at 31,000 ACFM with a 96% control efficiency.

EUG 2 Natural Gas-Fired Boilers

EU	Point	Description	MMBTUH	Date of Construction
NGB	1	Natural Gas-Fired Boiler No. 1	50.4	TBD
NGB	2	Natural Gas-Fired Boiler No. 2	50.4	TBD

EUG 3A Batch Drying Kilns

EU	Point	Description	Rating (MBfH)	Date of Construction
K	1	Batch Kiln No. 1	3.92	2002
K	2	Batch Kiln No. 2	3.92	2002
K	3	Batch Kiln No. 3	2.33	2017
K	4	Batch Kiln No. 4	2.33	2017

EUG 3B Continuous Drying Kiln

EU	Point	Description	Rating (MBfH)	Date of Construction
CDK	1	Continuous Drying Kiln	14.7	2019

EUG 4 Byproduct Storage Bins

EU	Point	Description	Date of Construction
SB	1	Shavings Storage Bin	2002
CB	1	Chip Storage Bin	2002
DS	1	Dried Sawdust	TBD

EUG 4A Byproduct Storage Piles

EU	Point	Description	Date of Construction
SP	1	Chip Storage Pile	2002
SP	2	Bark Storage Pile	2002
SP	3	Sawdust Storage Pile	2002

EUG 5 Storage Tanks

EU	Point	Description	Capacity (gallons)	Throughput (gallon/year)	Date of Construction
GT	1	Gasoline Tank (AST)	500	26,000	2002

EUG 6 Haul Roads

EU	Point	Description	VMT/year
HR	1	Unpaved Haul Roads	54,078

VMT - Vehicle Miles Traveled

EUG 8 Green Sawdust Dryers

EU	Point	Description	MMBTUH	Date of Construction
SD	1	Direct Fired Green Sawdust Burners No. 1	20.0	TBD
SD	2	Direct Fired Green Sawdust Burners No. 1 No. 2	12.0	TBD

Facility Stack Points and Parameters

EU	Point	Height (ft)	Diameter (ft)	Flow (ACFM)	Velocity (ft/s)	Temp. °F
PM	1	14.8	3.33	31,000	59.2	60
NGB	1	TBD	2.67	TBD	TBD	TBD
NGB	2	TBD	2.67	TBD	TBD	TBD
K	1	20	14 vents @ 2’ x 2’	Variable	Variable	140
K	2	20	14 vents @ 2’ x 2’	Variable	Variable	140
K	3	20	14 vents @ 2’ x 2’	Variable	Variable	140
K	4	20	14 vents @ 2’ x 2’	Variable	Variable	140
CDK	1	32.8	3.56	25,000	41.8	140
SD	1	30	TBD	TBD	TBD	TBD
SD	2	30	TBD	TBD	TBD	TBD

SECTION VI. EMISSIONS

Log Debarker (LD-1) PM, PM_{10}, & $PM_{2.5}$

Emissions from the log debarker are generated as the bark is removed from the logs. The maximum annual throughput is based on 190.62 MMBf dried lumber production and a raw log conversion factor of 8.2 lb/Bf. The hourly throughput is based on the maximum hourly debarker throughput of 109 tons per hour (TPH). Bark from the log debarker is mechanically conveyed to a storage pile. Emissions for conveyance are accounted for in the wood waste by-product storage emission calculations. The log debarker is contained within a partial enclosure with three sides and a roof. Emission factors for PM and PM_{10} are taken from a Texas Commission on Environmental Quality

(TCEQ) memo: *Wood Industry Emission Factors* (1/05). The emission factor for $PM_{2.5}$ is assumed to be 50% of the PM_{10} emission factor. This assumption is consistent with guidance provided by Oregon DEQ, *Guidance Document AQ-EF08* (08/2011). The TCEQ memorandum lists a control efficiency of 95% for partial enclosures, which is accounted for in the controlled emissions calculation.

Table 1 - Emission Factors for the Log Debarker (LD-1)

EU-Point	Pollutant	Emission Factor	Units
LD-1	PM	0.024	lb/ton of logs
	PM_{10}	0.011	
	$PM_{2.5}$	0.0055	

Table 2 - Emissions from the Log Debarker (LD-1)

		Uncontrolled			Controlled	
EU-Point	**Pollutant**	**lb/hr**	**TPY**	**Control**	**lb/hr**	**TPY**
LD-1	PM	2.61	9.38	95%	0.13	0.47
	PM_{10}	1.20	4.30	95%	0.06	0.21
	$PM_{2.5}$	0.60	2.15	95%	0.03	0.11

Sawmill Chippers (C-1) PM, PM_{10}, & $PM_{2.5}$

Emissions from the chippers are generated as the scrap and trim are reduced to chips. The maximum hourly and annual chipper throughput is based on the sawmill lumber throughput and the historic chip byproduct conversion factor of 1.6 ton/MBf. Chips from the chipper are mechanically conveyed to the storage bins or chip overflow pile. Emissions for conveyance are accounted for in the wood waste by-product storage emission calculations. The sawmill chippers have partial enclosures on the equipment for safety reasons and are located under a roof next to the sawmill building. The TCEQ memorandum states that the emission factors for the chippers are assumed to be the same as the debarking emission factors.

Table 3 - Emission Factors for the Sawmill Chippers (C-1)

EU-Point	Pollutant	Emission Factor	Units
C-1	PM	0.024	lb/ton of wood chipped
	PM_{10}	0.011	
	$PM_{2.5}$	0.0055	

Table 4 - Emissions from the Sawmill Chippers (C-1)

		Uncontrolled			Controlled	
EU/Point	**Pollutant**	**lb/hr**	**TPY**	**Control**	**lb/hr**	**TPY**
C-1	PM	1.02	3.66	95%	0.05	0.18
	PM_{10}	0.47	1.68	95%	0.02	0.08
	$PM_{2.5}$	0.23	0.84	95%	0.01	0.04

Sawmill (SM-1) PM, PM_{10}, & $PM_{2.5}$

Emissions from the sawmill are generated as the logs are sawed into rough cut lumber. The maximum annual throughput is based on 190.62 MMBf dried lumber production and a post-

debarking wood conversion factor of 7.6 lb/Bf. The hourly throughput is based on the maximum hourly sawmill throughput of 101 TPH. Sawdust from the sawmill is mechanically conveyed to the sawdust storage pile to be used as fuel for the sawdust dryers and to generate dried sawdust as a finished product; emissions for the conveyance is accounted for in the wood waste by-product storage emission calculations. The facility performs sawing within a building with four walls, a roof, and with door openings for material transfer. The saws within the sawmill, are individually enclosed with shrouds for employee safety which additionally provide dust reduction. The merchandizer saw, which simply completes one cut to get a debarked log to the proper length, does not have a shroud. Emission factors for PM and PM_{10} are taken from the TCEQ memo: *Wood Industry Emission Factors* (1/05). The emission factor for $PM_{2.5}$ is assumed to be 50% of the PM_{10} emission factor. This assumption is consistent with guidance provided by Oregon DEQ, *Guidance Document AQ-EF08* (08/2011). The TCEQ memorandum lists a control efficiency of 85% for partial enclosures and 90% for full enclosure or enclosed by a building. Although the partial shrouds over the saws provide some additional control of the emissions in addition to the control efficiency provided by the building, the document does not define what a partial enclosure must consist of to be attributed the stated control efficiency or that the specific control efficiency of being enclosed in a building did not encompass partial enclosure of the process. TCEQ guidance "Summary of Control Efficiencies" of the Texas Natural Resource Conservation Commission (TNRCC) CHEER Workshop indicates that combinations of control methods may be proposed and that they would be reviewed on a case-by-case basis. The guidance also states that combined control efficiencies that achieve greater than 97% would be allowed with a commitment of no visible emissions. Therefore, based on the guidance, the combined control efficiency requested by Teal-Jones was allowed in conjunction with a no visible emissions limit for the sawmill.

Table 5 - Emission Factors for the Sawmill (SM-1)

EU-Point	Pollutant	Emission Factor	Units
SM-1	PM	0.35	lb/ton of logs sawed
	PM_{10}	0.20	
	$PM_{2.5}$	0.10	

Table 6 - Emissions from the Sawmill (SM-1)

		Uncontrolled				Controlled	
EU-Point	**Pollutant**	**lb/hr**	**TPY**	**Control[1]**	**Control[1]**	**lb/hr**	**TPY**
SM-1	PM	35.35	126.76	85%	90%	0.53	1.90
	PM_{10}	20.20	72.44	85%	90%	0.30	1.09
	$PM_{2.5}$	10.10	36.22	85%	90%	0.15	0.54

[1] Represents the control efficiencies for the process being enclosed and for being enclosed in a building.

Planer Mill (PM-1) PM, PM_{10}, & $PM_{2.5}$

Emissions from the planer mill are generated as the rough-cut lumber is trimmed into finished lumber. The maximum throughput is based on 40 MBf/hr and 190.62 MMBf/yr dried lumber production and a dry-wood conversion factor of 2.64 lb/Bf. Planer/trimmer shavings and planer hogging activities are fully enclosed. The shavings are pneumatically conveyed from the planer mill via cyclone through an air seal into the shavings storage bin. Emissions from the shaving storage bin are accounted for in the by-product storage emission calculations. The Planer Mill cyclone is a custom unit, manufactured by Clark Allied, Inc. and is rated at a maximum 31,000

actual cubic feet per minute (ACFM) with an expected efficiency of 96% or greater. Emission factors for PM and PM_{10} are taken from the TCEQ memo: *Wood Industry Emission Factors* (1/05). The emission factor for $PM_{2.5}$ is assumed to be 50% of the PM_{10} emission factor. This assumption is consistent with guidance provided by Oregon DEQ, *Guidance Document AQ-EF08* (08/2011).

Table 7 - Emission Factors for the Planer Mill Cyclone

EU-Point	Pollutant	Emission Factor	Units
PM-1	PM	2.25	lb/ton-wood processed
	PM_{10}	0.90	
	$PM_{2.5}$	0.45	

Table 8 - Emissions from the Planer Mill Cyclone

		Uncontrolled			Controlled	
EU-Point	Pollutant	lb/hr	TPY	Control[1]	lb/hr	TPY
PM-1	PM	118.80	283.07	96%	4.75	11.32
	PM_{10}	47.52	113.23	96%	1.90	4.53
	$PM_{2.5}$	23.76	56.61	96%	0.95	2.26

[1] Represents the control efficiency listed in the previous permit

Natural Gas-Fired Boilers (NGB-1 & NGB-2) PM, PM_{10}, $PM_{2.5}$, VOC, CO, NO_X, SO_2, Pb, & HAP
Emissions from the natural gas-fired boilers are estimated using design capacity, 1,200-HP and 150-psi, reflecting 50.4-MMBTUH heat input per boiler. The emissions of NOx and CO are calculated based on the manufacturer's data. All other pollutants are calculated based on the emission factors from AP-42 (7/98), Section 1.4, and continuous operation. Emission factors for PM include both filterable and condensable PM.

Table 9 - Criteria Pollutant Emissions from the Natural Gas-Fired Boilers (NGB-1 and NGB-2), per boiler

Pollutant	Emission Factor (lb/MMSCF)	Potential Emissions	
		lb/hr	TPY
Total PM	7.6	0.38	1.64
PM_{10}	7.6	0.38	1.64
$PM_{2.5}$	7.6	0.38	1.64
VOC	5.5	0.27	1.19
CO	0.037 lb/MMBTU	1.84	8.07
NO_X	0.084 lb/MMBTU	4.24	18.55
SO_2	0.6	0.03	0.13
Lead	0.0005	<0.01	<0.01

HAP from the natural gas-fired boilers (NGB-1 and NGB-2) are shown in the tables below. Only those emissions greater than 0.01 TPY, are represented below.

Table 10 - HAP Emissions from the Natural Gas-Fired Boilers (NGB-1 and NGB-2), per boiler

HAP	CAS #	(TPY)
Hexane	110543	0.39

HAP	CAS #	(TPY)
Formaldehyde	50000	0.02
Total		**0.42**

Batch Lumber Drying Kilns (K-1, K-2, K3, & K4) VOC, PM, PM_{10}, $PM_{2.5}$, & HAP

Emissions from the kilns are a result of drying the rough-cut lumber. The maximum annual throughput is based on 90.62 MMBf dried lumber production. The hourly throughput is based on the maximum hourly kiln throughput of 3.92 MBf for K-1 and K-2 and 2.33 MBf for K-3 and K-4. Emissions from the kilns are estimated based on the throughput and the emission factors sources indicated in the following tables. For the purposes of major source determination, emissions from the lumber drying kilns must be calculated as the total mass of VOCs (an "as VOC" basis), as is summarized in the EPA Memorandum to Region 10 (12/00). Expressing VOC emissions in any other way (e.g., as propane) may underestimate the quantity of VOCs being emitted and thereby result in erroneous major source/modification determinations. Emissions of VOC have been conservatively estimated using the Wood Products Protocol 1 (WPP1) VOC calculation.

Table 11 - Batch Lumber Drying Kiln Emission Factors

Pollutant	Factor lb/MBf	Emission Factor Reference
VOC [1]	3.5	ADEQ Memorandum: *VOC Emissions from Lumber Drying Kilns* (10/31/14); Indirect Fired (Steam Heated) Batch Kilns
VOC [2]	4.416	EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC [2] = 1.225 VOC [1] + (1-0.65) Methanol + Formaldehyde
PM	0.022	NCDENR - *Wood Kiln Emissions Calculator*, Rev. C (7/10/07) (Average Value from NCASI Emission Data, Indirect Fired, Pine)
PM_{10}	0.022	Assumed PM_{10} emissions are equivalent to PM emissions.
$PM_{2.5}$	0.011	Assumed $PM_{2.5}$ emissions are equivalent to 50% of PM_{10} emissions.
Methanol [3]	0.180	EPA Memorandum: *Development of a Provisional Emission Calculation Tool for Inclusion in the PCWP ICR* (6/30/17); Lumber Kiln: Softwood: Pine Species (NCASI Emission Factors 2014 - Direct Fired)
Phenol [3]	0.010	
Formaldehyde [3]	0.065	
Acetaldehyde [3]	0.040	
Acrolein [3]	0.004	
Propionaldehyde [3]	0.004	

[1] - as propane

[2] - Wood Products Protocol 1 (WPP1) VOC

[3] - HAP; NCASI: National Council for Air and Stream Improvement

Table 12 - Criteria Pollutant Emissions from Batch Kilns

	VOC [2]		PM		PM_{10}		$PM_{2.5}$	
EU	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
K-1	17.30	200.07	0.09	1.00	0.09	1.00	0.04	0.50
K-2	17.30		0.09		0.09		0.04	
K-3	10.27		0.05		0.05		0.03	
K-4	10.27		0.05		0.05		0.03	

[2] - Wood Products Protocol 1 (WPP1) VOC

Table 13 - HAP Emissions from Batch Kilns

HAP	CAS #	(TPY)
Methanol	67-56-1	8.16
Phenol	108-95-2	0.45
Formaldehyde	50-00-0	2.95
Acetaldehyde	75-07-0	1.81
Acrolein	107-02-8	0.18
Propionaldehyde	123-38-6	0.18
Total		**13.73**

Continuous Lumber Drying Kiln (CDK-1) VOC, PM, PM_{10}, $PM_{2.5}$, & HAP

Emissions from the kiln are a result of drying the rough-cut lumber. The maximum annual throughput is based on 100 MMBf dried lumber production. The hourly throughput is based on the maximum hourly kiln throughput of 14.7 MBf. Emissions from the kilns are estimated based on the throughput and the emission factors sources indicated in the following table. For the purposes of major source determination, emissions from the lumber drying kilns must be calculated as the total mass of VOCs (an "as VOC" basis), as is summarized in the EPA Memorandum to Region 10 (12/00). Expressing VOC emissions in any other way (e.g., as propane) may underestimate the quantity of VOCs being emitted and thereby result in erroneous major source/modification determinations. Emissions of VOC have been conservatively estimated using the Wood Products Protocol 1 (WPP1) VOC calculation.

Table 14 - Continuous Lumber Drying Kiln Emission Factors

Pollutant	Factor lb/MBf	Emission Factor Reference
VOC [1]	3.8	ADEQ Memorandum: *VOC Emissions from Lumber Drying Kilns* (10/31/14); Direct Fired Batch Kilns
VOC [2]	4.783	EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC [2] = 1.225 VOC [1] + (1-0.65) Methanol + Formaldehyde
PM	0.143	NCDENR - *Wood Kiln Emissions Calculator*, Rev. C (7/10/07) (Average Value from NCASI Emission Data, Gasifier)
PM_{10}	0.143	Assumed PM_{10} emissions are equivalent to PM emissions.
$PM_{2.5}$	0.072	Assumed $PM_{2.5}$ emissions are equivalent to 50% of PM_{10} emissions.
Methanol [3]	0.180	EPA Memorandum: *Development of a Provisional Emission Calculation Tool for Inclusion in the PCWP ICR* (6/30/17); Lumber Kiln: Softwood: Pine Species (NCASI Emission Factors 2014 - Direct Fired)
Phenol [3]	0.010	
Formaldehyde [3]	0.065	
Acetaldehyde [3]	0.040	
Acrolein [3]	0.004	
Propionaldehyde [3]	0.004	

[1] - as propane

[2] - Wood Products Protocol 1 (WPP1) VOC

[3] - HAP; NCASI: National Council for Air and Stream Improvement

Table 15 - Criteria Pollutant Emissions from Continuous Kiln [1]

EU	VOC [2]		PM		PM_{10}		$PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
CDK-1	70.41	239.15	2.06	7.00	2.06	7.00	1.03	3.50

[1] - Emissions from Drying Lumber

[2] - Wood Products Protocol 1 (WPP1) VOC

Table 16 - HAP Emissions from Continuous Kiln

HAP	CAS #	(TPY)
Methanol	67-56-1	9.00
Phenol	108-95-2	0.50
Formaldehyde	50-00-0	3.25
Acetaldehyde	75-07-0	2.00
Acrolein	107-02-8	0.20
Propionaldehyde	123-38-6	0.20
Total		**15.15**

CDK-1 Natural Gas Combustion CO, NO_X, & SO_2

Natural gas is used to fuel CDK-1. The burners for CDK-1 have a maximum heat input capacity of 16 MMBTUH. NO_X and CO emissions from natural gas combustion are estimated based on the heat input, the given concentrations, the volume calculated using Method 19, and continuous operation. SO_2 emissions from natural gas combustion are estimated based on the heat input, the emission factor from AP-42 (7/98), Section 1.4, and continuous operation.

Table 17 - Criteria Pollutant Emissions from Natural Gas Combustion (CDK-1)

Pollutant	Concentration	Emission Factor	Potential Emissions	
	ppmvd @ 3% O_2	(lb/MMBTU)	lb/hr	TPY
CO	400	0.297	4.73	20.70
NO_X	100	0.122	1.94	8.51
SO_2	N/A	0.0006	0.01	0.04

Byproduct Storage Bins (CB-1, SB-1, & DS-1) PM, PM_{10}, & $PM_{2.5}$

Emissions are generated in the chip (CB-1), shaving (SB-1), and dried sawdust (DS-1) storage bins as a result of storage and loadout of the chips, shavings, and dried sawdust. The maximum hourly and annual chip throughput for CB-1 is based on the sawmill production rate and the historical chip byproduct conversion factor of 1.6 ton/MBf. Similarly, the maximum hourly and annual shavings throughput for SB-1 is based on the planer mill production rate and the historical shavings byproduct conversion factor of 0.18 ton/MBf. The maximum hourly and annual dried sawdust throughputs for DS-1 are based on the sawdust dryer production of 19,034 tons of dried sawdust per year and maximum design capacity of 9.52 tons of dried sawdust per hour for both dryers.

Emission factors for PM are taken from an Arkansas Department of Environmental Quality (ADEQ) memorandum: *Updated PM and PM_{10} Emissions from Bins and Loadout of Wood Chips, Wood Shavings, and Bark* (8/22/03). The emission factor for $PM_{2.5}$ is assumed to be 50% of the PM_{10} emission factor. This assumption is consistent with guidance provided by Oregon DEQ, *Guidance Document AQ-EF08* (08/2011). At 12% moisture content, the dried sawdust properties

are closer to planer shavings than green sawdust. Therefore, emissions from DS-1 are calculated using the dried shavings emission factors.

Table 18 - Emission Factors for the Byproduct Storage Bins

Description	Pollutant	Storage Factor	Loading Factor	Units
Green Chips	PM	0.00040	0.00080	lb/ton-wood processed
	PM_{10}	0.00004	0.00008	
	$PM_{2.5}$	0.00002	0.00004	
Dried Shavings	PM	0.00110	0.00220	lb/ton-wood processed
	PM_{10}	0.00009	0.00018	
	$PM_{2.5}$	0.00005	0.00009	

Table 19 - Emissions from the Byproduct Storage Bins

		Storage		Loading		Totals	
EU-Point	**Pollutant**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
CB-1	PM	0.017	0.061	0.034	0.122	0.051	0.183
	PM_{10}	0.002	0.006	0.003	0.012	0.005	0.018
	$PM_{2.5}$	0.001	0.003	0.002	0.006	0.003	0.009
SB-1	PM	0.008	0.019	0.016	0.038	0.024	0.057
	PM_{10}	0.001	0.002	0.001	0.003	0.002	0.005
	$PM_{2.5}$	0.000	0.001	0.001	0.002	0.001	0.003
DS-1	PM	0.010	0.010	0.021	0.021	0.031	0.031
	PM_{10}	0.001	0.001	0.002	0.002	0.003	0.003
	$PM_{2.5}$	<0.001	<0.001	0.001	0.001	0.001	0.001

Byproduct Storage Piles (SP-1, SP-2, & SP-3) PM, PM_{10}, & $PM_{2.5}$

Emissions from the storage piles that are generated from wind erosion are estimated using the predictive emission factor Equations 3, 6, & 7 of AP-42 (11/06), Section 13.2.5, pile storage areas, standard subarea percentages for a conical pile, the average wind speed for Oklahoma City (12.92 m/s), and a threshold friction velocity of 0.76 for sawdust and 1.0 for chips and bark. Emissions from the storage piles are considered fugitive since they could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

Table 20 - Storage Pile Parameters

EU-Point	Description	Base Diameter (ft)	Height (ft)	Surface Area (ft^2)
SP-1	Chip Overflow Storage Pile	75	40	10,877
SP-2	Bark Storage Pile	50	32	5,154
SP-3	Sawdust Storage Pile	50	32	5,154

Emissions generated by wind erosion are also dependent on the frequency of disturbance of the erodible surface because each time that a surface is disturbed, its erosion potential is restored. A disturbance is defined as an action that results in the exposure of fresh surface material. On a storage pile, this would occur whenever aggregate material is either added to or removed from the old surface. It is conservatively assumed that each storage pile surface is disturbed every day of

the year, corresponding to a value of N=365. The emission factor for wind-generated particulate emissions from mixtures of erodible and non-erodible surface material subject to disturbance may be expressed in units of pounds per square foot (lb/ft^2) per year expressed in the description below.

Table 21 - Emissions from Wind Erosion

EU-Point	PM TPY	PM_{10} TPY	$PM_{2.5}$ TPY
SP-1	0.16	0.08	0.01
SP-2	0.08	0.04	0.01
SP-3	0.30	0.15	0.02

Emissions are generated at the storage piles (SP-1, SP-2, & SP-3) as a result of handling chips, bark, and sawdust. The storage pile handling emissions assume one drop for conveyance onto the pile and one drop for loadout into a truck bed. The maximum annual throughput was based on the maximum sawmill throughput of 190.62 MMBf and the following conversion factors: 1.6 tons chips/MBf, 0.3 tons bark/MBf, and 0.35 tons sawdust/MBf. The maximum hourly throughput was based on the maximum hourly sawmill throughput of 26.6 MBf and the same lumber conversion factors.

Emission factors for PM, PM_{10}, and $PM_{2.5}$ are calculated using AP-42 (11/06), Section 13-2-4 similar to the EPA Region 10 memorandum, *Particulate Matter Potential to Emit Emission Factors for Activities at Sawmills, excluding boilers, located in Pacific Northwest Indian Country*, (5/8/14). Green bark, chips, and sawdust are estimated to have an approximate moisture content of 51% and are considered "wet" material. No dried sawdust will be stored at the storage piles.

Table 22 - Emission Factors for the Storage Piles Handling

Pollutant	Emission Factor	Units
PM	0.00019	lb/ton
PM_{10}	0.00009	
$PM_{2.5}$	0.00001	

Table 23 - Emissions from the Storage Piles Handling

EU-Point	PM TPY	PM_{10} TPY	$PM_{2.5}$ TPY
SP-1	0.057	0.027	0.004
SP-2	0.011	0.005	0.001
SP-3	0.012	0.006	0.001

Table 24 - Emission Summary for Storage Piles

EU-Point	PM TPY	PM_{10} TPY	$PM_{2.5}$ TPY
SP-1	0.217	0.107	0.014
SP-2	0.091	0.045	0.011
SP-3	0.312	0.156	0.021

Byproduct VOC Emissions

VOC and HAP emissions estimates from wood handling (debarking, sawing, shaving and chipping operations) and storage activities were provided for Title V emission accounting purposes. The emission factors are based on emission factors from the EPA Region 10 Plywood Mill guidance that provides VOC and HAP emission estimates for activities at Pacific Northwest plywood mills (3/2016). The emission factors represent the 90th percentile (or 95th percentile in the case of EF for pneumatic conveyance of green wood residue) of the data when three or more test values are available and the maximum test value of the data when less than three test values are available.

Table 25 - Wood Residue Handling Emission Factors

	VOC [1]	Methanol [2]	VOC [3]	Throughput	VOC [3]
Material	**(lb/ODT)**	**(lb/ODT)**	**(lb/ODT)**	**ODT [4]**	**TPY**
Hog/Bark Handling	0.3290	-	0.3290	28,021	4.61
Sawmill/Sawdust Handling	0.5017	0.0016	0.6151	32,691	10.05
Planer Mill/Shavings Handling	0.5017	0.0016	0.6151	29,165	8.97
Chipper/Chip Handling	0.5017	0.0016	0.6151	149,446	45.96

[1] - as propane; NCASI Technical Bulletin No. 723 *Laboratory and Limited Field Measurements of VOC Emissions from Wood Residuals* (9/1996).

[2] - NCASI Technical Bulletin No. 773 *Volatile Organic Compound Emissions from Wood Products Manufacturing Facilities, Part VI - Hardboard and Fiberboard* (1/1999).

[3] - Wood Products Protocol 1 (WPP1) VOC.

[4] - Based on a moisture content of 51% and the ratio of byproduct produced to lumber throughput.

These emissions were apportioned to each modification based on throughput and were assigned to the operation which generated the wood residue.

Gasoline Storage Tank (GT-1) VOC

The facility has a 500-gallon gasoline storage tank on-site for facility-vehicle use. Emissions are estimated using EPA TANKS 4.0.9d.

Table 26 - Emissions from Storage Tank (GT-1)

EU-Point	Gallons/Year	Fuel Type	VOC (TPY)
GT-1	26,000	RVP 9	0.13

Haul Roads (HR-1) PM, PM_{10}, & $PM_{2.5}$

Raw materials, byproducts, and finished products are transported on haul roads. Emissions from haul roads are estimated using Equation 1a for unpaved haul roads from AP-42 (11/06), Section 13.2-2, a mean silt content of 8.4, the given vehicle weights, and the number of vehicle miles traveled. The facility has proposed to use basic watering as control (Option 1 from the Utah DEQ guidelines: *Emission Factors for Paved and Unpaved Haul Roads* (1/12/15) which requires basic watering with a 70% control efficiency).

Table 27 - Truck Traffic Details

Description	Annual Material Throughput (TPY)	Max Material Weight (tons/truck)	Hourly VMT	Annual VMT
Logs	781,542	33.5	8.9	20,696
Chips	304,992	26.0	4.3	12,664
Bark	57,186	18.5	1.0	3,231
Sawdust	66,717	18.5	1.1	3,894
Shavings	34,312	21.5	1.6	2,627
Lumber	217,307	25.0	6.0	12,982

Table 28 - Emissions from Haul Roads (HR-1)

Material	Emission Factors (lb/VMT)			Uncontrolled Emissions (TPY)			Controlled Emissions (TPY)		
	PM	**PM_{10}**	**$PM_{2.5}$**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**PM**	**PM_{10}**	**$PM_{2.5}$**
Logs	11.12	3.17	0.32	115.0	32.78	3.28	34.50	9.84	0.98
Chips	10.18	2.90	0.29	64.42	18.36	1.84	19.33	5.51	0.55
Bark	9.87	2.81	0.28	15.94	4.54	0.45	4.78	1.36	0.14
Sawdust	9.87	2.81	0.28	19.22	5.47	0.55	5.76	1.64	0.16
Shavings	10.64	3.03	0.30	13.97	3.98	0.40	4.19	1.19	0.12
Lumber	10.35	2.95	0.30	67.16	19.14	1.91	20.15	5.74	0.57
Totals				**295.71**	**84.27**	**8.43**	**88.72**	**25.29**	**2.53**

Green Sawdust Dryers (SD-1 & SD-2) PM, PM_{10}, $PM_{2.5}$, VOC, CO, NO_X, & HAP

The sawdust dryers utilize direct fired sawdust burners and dry the green sawdust from approximately 53% moisture down to approximately 12% moisture. The maximum annual throughput for the dryers is based on 19,034 tons dried sawdust as product at 12% and 16,750 oven dried tons (ODT) sawdust as product (oven dried is equivalent to 0% moisture content). Maximum hourly emissions for SD-1 and SD-2 are estimated using the design capacity for each dryer at 6.1 ODT and 3.4 ODT per hour, respectively. Emission factors from the sawdust dryers are based on AP-42 (2/02) Section 10.6.2 for rotary dryer, green (inlet moisture content > 50%, dry basis), direct wood-fired, softwood, uncontrolled, except for PM_{10} Filterable. For PM_{10} Filterable, the direct wood-fired factor is used, as the green factor indicated "ND" or no data available. Since the filterable PM, PM_{10}, and $PM_{2.5}$ emission factors do not include the condensable PM emissions, condensable PM is added to the PM, PM_{10}, and $PM_{2.5}$ emissions in the facility-wide emissions summary.

Table 229 - Criteria Pollutant Emissions from the Green Sawdust Dryers (SD-1 and SD-2)

Pollutant	Emission Factor (lb/ODT)	SD-1	SD-2	Total Emissions	
		lb/hr	lb/hr	lb/hr	TPY
PM (Filterable)	2.2	13.46	7.50	20.96	18.42
PM_{10} (Filterable)	0.69	4.22	2.35	6.57	5.78
$PM_{2.5}$ (Filterable) [1]	0.35	2.11	1.18	3.29	2.89
PM (Condensable)	1.1	6.73	3.75	10.48	9.21
THC as Carbon	3.9	23.85	13.30	37.15	32.66

Pollutant	Emission Factor (lb/ODT)	SD-1	SD-2	Total Emissions	
		lb/hr	lb/hr	lb/hr	TPY
VOC (WPP1) [2]	4.74	29.02	16.18	45.20	39.74
CO	3.5	21.41	11.94	33.34	29.31
NO_X	2.7	16.51	9.21	25.72	22.61

[1] - Assume $PM_{2.5}$ (Filterable) = 50% PM_{10} (Filterable).

[2] - EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC (WPP1) = 1.225 THC as Carbon – (acetone + methane + methylene chloride) + (1-0.65) Methanol + Formaldehyde.

Table 30 - HAP Emissions from the Green Sawdust Dryers (SD-1 and SD-2)

HAP	CAS #	(TPY)
Acetaldehyde	75-07-0	0.63
Acrolein	107-02-8	0.19
Benzene	71-43-2	0.06
Cumene	98-82-8	0.02
Formaldehyde	50-00-0	1.17
Methanol	67-56-1	0.92
Methyl Isobutyl Ketone	108-10-1	0.06
Methylene Chloride	75-09-2	0.02
Phenol	108-95-2	0.23
Propionaldehyde	123-38-6	0.11
Styrene	100-42-5	<0.01
Toluene	108-88-3	0.11
Xylene	1330-20-7	0.04
Total		**3.56**

A. Facility-Wide Summary

Criteria Pollutants

Since the potential emissions of VOC exceed 100 TPY, the facility is considered to be a major source for this pollutant. The facility will be a synthetic-minor source for PM_{10}, since the facility-wide emissions would exceed major source threshold without the planer mill control unit.

Emission Summary (Hourly)

EU-Point	NO_X	VOC	CO	SO_2	PM	PM_{10}	$PM_{2.5}$
	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
LD-1	--	--	--	--	0.13	0.06	0.03
C-1	--	--	--	--	0.05	0.02	0.01
SM-1	--	--	--	--	0.53	0.30	0.15
PM-1	--	--	--	--	4.75	1.90	0.95
NGB-1 & 2	8.47	0.54	3.68	0.06	0.75	0.75	0.75
K-1	--	17.30	--	--	0.09	0.09	0.04
K-2	--	17.30	--	--	0.09	0.09	0.04
K-3	--	10.27	--	--	0.05	0.05	0.03

EU-Point	NO_X (lb/hr)	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)
K-4	--	10.27	--	--	0.30	0.30	0.20
CDK-1	1.94	70.41	4.73	0.01	2.06	2.06	1.03
CB-1	--	--	--	--	0.05	0.01	<0.01
SB-1	--	--	--	--	0.02	<0.01	<0.01
DS-1	--	--	--	--	0.03	<0.01	<0.01
SP-1, 2, & 3	--	--	--	--	3.00	1.49	0.22
GT-1	--	2.80	--	--	--	--	--
HR-1	--	--	--	--	29.58	8.43	0.84
SD-1	16.51	29.02	21.41	--	20.18	10.95	8.84
SD-2	9.21	16.18	11.94	--	11.25	6.10	4.93
Total Emissions	**36.13**	**174.09**	**41.76**	**0.07**	**72.91**	**32.60**	**18.06**
Previous Emissions (Permit No. 2017-0446-TV)	**14.61**	**129.33**	**39.29**	**1.45**	**60.69**	**32.49**	**18.94**
Change in Emissions	**21.52**	**44.76**	**2.47**	**-1.38**	**12.22**	**0.11**	**-0.88**

Emission Summary (Annual)

EU-Point	NO_X (TPY)	VOC (TPY)	CO (TPY)	SO_2 (TPY)	PM (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
LD-1	--	4.61	--	--	0.47	0.21	0.11
C-1	--	45.97	--	--	0.18	0.08	0.04
SM-1	--	10.05	--	--	1.90	1.09	0.54
PM-1	--	8.97	--	--	11.32	4.53	2.26
NGB-1 & 2	37.10	2.38	16.14	0.26	3.29	3.29	3.29
K-1	--	200.07	--	--	1.00	1.00	0.50
K-2	--		--	--			
K-3	--		--	--			
K-4	--		--	--			
CDK-1	8.51	239.15	20.70	0.04	7.00	7.00	3.50
CB-1	--	--	--	--	0.18	0.02	0.01
SB-1	--	--	--	--	0.06	0.01	<0.01
DS-1	--	--	--	--	0.03	<0.01	<0.01
SP-1, 2, & 3	--	--	--	--	0.62	0.31	0.05
GT-1	--	0.13	--	--	--	--	--
HR-1	--	--	--	--	88.72	25.29	2.53
SD-1 & 2	22.61	39.74	29.31	--	27.64	14.99	12.14
Totals	**68.22**	**551.07**	**66.15**	**0.30**	**142.40**	**57.80**	**24.96**
Previous Emissions (Permit No. 2017-0446-TV)	**64.01**	**513.24**	**172.07**	**6.35**	**196.00**	**116.13**	**76.82**
Change in Emissions	**4.21**	**37.83**	**-105.92**	**-6.05**	**-53.60**	**-58.33**	**-51.86**

HAP

Emissions of combined HAP total 33.26 TPY, with the highest level of individual HAP (Methanol) estimated to be 18.08 TPY. Since potential emissions of a single HAP are greater than 10 TPY and total HAP are greater than 25 TPY, the facility is a major source of HAP.

HAP Emission Summary (Annual)

HAP	CAS #	Emissions (TPY)
Methanol	67561	18.08
Phenol	108952	1.19
Formaldehyde	50000	7.40
Acetaldehyde	75070	4.44
Acrolein	107028	0.57
Propionaldehyde	123386	0.49
Benzene	71432	0.06
Cumene	98828	0.02
Hexane	110543	0.78
Methyl Isobutyl Ketone	108101	0.06
Methylene Chloride	75092	0.02
Styrene	100425	<0.01
Toluene	108883	0.11
Xylene	95476	0.04
Total Emissions		**33.26**
Previous Emissions (Permit No. 2017-0446-TV)		**39.13**
Change in Emissions		**-5.87**

SECTION VII. PSD ANALYSIS

The Antlers Sawmill is a PSD major source. The proposed project includes the installation of two (2) natural gas-fired boilers (NGB-1 and NGB-2) and two (2) direct fired green sawdust burners (SD-1 and SD-2). The boilers are replacement units for the two (2) existing wood fired boilers (B-1 and B-2) which will be dismantled. OAC 252:100-8-31 states that a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases: (i) a significant emissions increase and (ii) a significant net emissions increase resulting from a physical change in or change in the method of operation of a major stationary source. Teal-Jones used the "Hybrid test for projects that involve multiple types of emissions units" as outlined in OAC 252:100-8-30(b)(5) to demonstrate that the proposed project will not cause a significant emissions increase. With this test, a significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit from each new emissions unit and projected actual from each existing emissions unit following completion of the project and the baseline actual emissions (BAE) of these units before the project equals or exceeds the amount that is significant for that pollutant.

"Potential to emit" (PTE) for the boilers reflect maximum capacity under their physical and operational design. The PTE for the sawdust dryers utilized an operational limitation of 16,750 oven dried tons of sawdust produced. For these new emissions units, the "baseline actual

emissions" equal zero. Based on guidance provided by the Environmental Protection Agency on March 13, 2018, through the memo titled "Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program" or better known as "The Pruitt Memo", Teal-Jones has completed "project emissions accounting" in the PSD emissions increase analysis. This project accounting recognizes the elimination of previous baseline actual emissions due to equipment replacement or modification. The baseline actual emissions from the wood fired boilers (B-1 and B-2) reflect historic emissions reported through the facility's Emission Inventory submitted to the Department for CY2017 and CY2018. Boiler emissions for those two years are averaged and deducted from the potential emissions of the new sources.

Since dry sawdust was previously not handled on-site, PTE for dried sawdust storage and handling (DS-1) are calculated using an operational limitation of 16,750 oven dried tons of sawdust produced from the sawdust dryers.

All project directly affected sources were reviewed to determine the project-related emissions increases for each pollutant. The sources directly affected by the proposed project include Truck Traffic (HR-1) for shipping of dried sawdust, Dried Sawdust (DS-1) for storage and handling of dried sawdust, the new gas-fired boilers (NGB-1 and NGB-2), and Batch Kilns (K-1 through K-4) since the kilns are indirectly heated via steam produced from the new natural gas-fired boilers. Only the Batch Kilns (K-1 through K-4) use the stream generated from the boilers. Even though the new natural gas-fired boilers have higher heat ratings and greater short-term potential steam productions than the existing wood fired boilers, Teal-Jones has stated that no actual production increases are expected at the facility. Teal-Jones has indicated that the projected actual emissions (PAE) from the Batch Kilns and associated sources will not exceed the BAE and will track board foot production from the Batch Kilns to ensure that the PAE for the associated emission units do not exceed the BAE rather than calculating BAE and PAE for all potential associated emission sources. To remain consistent with the previous baseline period used in the application, Teal-Jones has used the emissions and board foot production from the Batch Kilns during CY2017 and CY2018 as provided through Redbud for Emissions Inventory reporting. The board foot lumber production dried within the Batch Kilns and resulting VOC emissions from that baseline period were averaged to determine an annual board foot production rate. This annual production rate will be used to ensure that the PAE for all associated emission sources related to the project expected during the five years after completion of the project will not exceed the BAE. The compliance requirement of Specific Condition 1. EUG 3A B. for monitoring and recording of the monthly and 12-month rolling total production of the Batch Kilns will suffice to verify that the facility board foot production of 71 MMBf/yr is not exceeded for a period of five years following replacement of the boilers. Since emissions from associated sources upstream and downstream of the Batch Kilns are based on the annual board foot production rate, tracking annual production will ensure that their PAE are equal to their BAE. Therefore, no project emission increases are expected from these sources.

The PSD applicability analysis was included with the application. Teal-Jones provided the following to demonstrate that project-related emissions increases are below applicable PSD thresholds.

Step 1 – Calculate BAE

WOOD FIRED BOILERS

The BAE for each pollutant from the wood fired boilers (B-1 and B-2) were calculated for the consecutive 24-month period of 2017-2018 (January 1, 2017 through December 31, 2018). The following tables present the two separate years of emissions for 2017 and 2018 and then the average which is used as the baseline.

2017/2018 Baseline Actual Emissions – B-1 &B-2 (Redbud Calcs)

Pollutant	2017 Annual Emissions	2018 Annual Emissions	Average Annual Emissions
	TPY	TPY	TPY
NO_X	36.25	42.04	39.14
CO	98.86	114.65	106.76
VOC	2.80	3.25	3.02
Total PM	57.17	66.31	61.74
PM_{10}	50.58	58.66	54.62
$PM_{2.5}$	43.99	51.02	47.51
SO_2	4.12	4.78	4.45

BATCH DRYING KILNS

The BAE for each pollutant from the Batch Kilns (K-1 through K-4) were calculated for the consecutive 24-month period of 2017-2018 (January 1, 2017 through December 31, 2018). The following tables present the two separate years of emissions for 2017 and 2018 and then the average which is used as the baseline.

Batch Lumber Drying Kiln Emission Factors

Pollutant	Factor lb/MBf	Emission Factor Reference
VOC [2]	4.416	EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC [2] = 1.225 VOC [1] + (1-0.65) Methanol + Formaldehyde
PM	0.022	NCDENR - *Wood Kiln Emissions Calculator*, Rev. C (7/10/07) (Average Value from NCASI Emission Data, Indirect Fired, Pine)
PM_{10}	0.022	Assumed PM_{10} emissions are equivalent to PM emissions.
$PM_{2.5}$	0.011	Assumed $PM_{2.5}$ emissions are equivalent to 50% of PM_{10} emissions.

2017/2018 Baseline Actual Emissions – K-1 through K-4 (Redbud Calcs)

Pollutant	2017 Annual Emissions @57.743 MMBf/yr	2018 Annual Emissions @84.319 MMBf/yr	Average Annual Emissions	Average Production
	TPY	TPY	TPY	MMBf
VOC	127.60	186.15	156.88	71.03
PM	0.64	0.93	0.78	
PM_{10}	0.64	0.93	0.78	
$PM_{2.5}$	0.32	0.46	0.39	

NATURAL GAS-FIRED BOILERS, GREEN SAWDUST DRYERS, AND DRIED SAWDUST
Since the (2) natural gas-fired boilers (NGB-1 and NGB-2), two (2) direct fired green sawdust dryers (SD-1 and SD-2), and dried sawdust storage and loading (DS-1) are new emission units, the BAE for NO_X, CO, VOC, PM, and SO_2 will be represented as zero.

TRUCK TRAFFIC
After the removal of the wood fired boilers, additional truck traffic emissions are expected due to the increase in sawdust generated. However, to be conservative, no credit was taken for BAE and is therefore represented as zero.

Step 2 – Calculate PAE or PTE

As mentioned earlier, Teal-Jones is using either the actual-to-projected actual test or the actual-to-potential applicability test for projects that involve new and existing emissions units required under OAC 252:100-8-30(b)(5) on a pollutant-specific basis.

NATURAL GAS-FIRED BOILERS
For the Potential to Emit of NO_X, CO, VOC, PM, and SO_2 from the natural gas-fired boilers, the emissions were estimated using the design capacity of 50.4-MMBTUH heat input per boiler, continuous operation, and the emission factors listed in the following table. Emission factors for PM include both filterable and condensable PM.

PTE - Natural Gas-Fired Boilers (NGB-1 and NGB-2), per boiler

Pollutant	Emission Factor	Source	Potential Emissions
			TPY
NO_X	0.084 lb/MMBTU	Manufacturer's Data	18.55
CO	0.037 lb/MMBTU	Manufacturer's Data	8.07
VOC	5.5 lb/MMSCF [1]	AP-42 (7/98), Section 1.4	1.19
Total PM	7.6 lb/MMSCF [1]	AP-42 (7/98), Section 1.4	1.64
PM_{10}	7.6 lb/MMSCF [1]	AP-42 (7/98), Section 1.4	1.64
$PM_{2.5}$	7.6 lb/MMSCF [1]	AP-42 (7/98), Section 1.4	1.64
SO_2	0.6 lb/MMSCF [1]	AP-42 (7/98), Section 1.4	0.13

[1] – Based on heating value of 1,020 BTU/SCF.

GREEN SAWDUST DRYERS
The sawdust dryers utilize direct fired sawdust burners and dry the green sawdust from approximately 53% moisture down to approximately 12% moisture. Teal-Jones proposes a cap on the sawdust dryer production of 16,750 oven dried tons sawdust as product (oven dried is equivalent to 0% moisture content) for the purpose of Potential to Emit. Emission factors for the sawdust dryers are based on AP-42 (2/02), Section 10.6.2 for rotary dryer, green (inlet moisture content > 50%, dry basis), direct wood-fired, softwood, uncontrolled, except for PM_{10} Filterable. For PM_{10} Filterable, the direct wood-fired factor is used as the green factor indicated "ND", no data available.

PTE - Green Sawdust Dryers (SD-1 and SD-2)

Pollutant	Emission Factor (lb/ODT)	Source	Potential Emissions
			TPY
PM (Filterable)	2.2	AP-42 (2/02), Section 10.6.2	18.42
PM_{10} (Filterable)	0.69	AP-42 (2/02), Section 10.6.2	5.78
$PM_{2.5}$ (Filterable) [1]	0.35	AP-42 (2/02), Section 10.6.2	2.89
PM (Condensable)	1.1	AP-42 (2/02), Section 10.6.2	9.21
THC as Carbon	3.9	AP-42 (2/02), Section 10.6.2	32.66
VOC (WPP1) [2]	4.74	AP-42 (2/02), Section 10.6.2	39.74
CO	3.5	AP-42 (2/02), Section 10.6.2	29.31
NO_X	2.7	AP-42 (2/02), Section 10.6.2	22.61

[1] – Assume $PM_{2.5}$ (Filterable) = 50% PM_{10} (Filterable).

[2] – EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC (WPP1) = 1.225 THC as Carbon – (acetone + methane + methylene chloride) + (1-0.65) Methanol + Formaldehyde.

BATCH DRYING KILNS

The new natural-gas fired boilers have higher heat ratings and greater short-term potential steam production than the existing wood fired boilers. However, Teal-Jones stated that no actual production increase is expected at the facility. Teal-Jones proposed that the PAE from the Batch Kilns, using the steam from the natural gas-fired boilers, will not exceed that of the baseline actual emissions from the Batch Kilns, which was based on the steam used from the wood fired boilers. The compliance requirement of Specific Condition 1. EUG 3A B. for monitoring and recording of monthly and 12-month rolling total Batch Kiln drying will suffice to verify the projection board footage rate of 71 MMBf/yr from the baseline period is not exceeded for a period of five years.

Projected Actual Emissions – K-1 through K-4

Pollutant	Projected Actual Production	Factor	Source	PAE
	MMBf	lb/MBf		TPY
VOC	71.03	4.416	EPA Guidance, *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07); VOC [2] = 1.225 VOC [1] + (1-0.65) Methanol + Formaldehyde	156.88
PM		0.022	NCDENR - *Wood Kiln Emissions Calculator*, Rev. C (7/10/07) (Average Value from NCASI Emission Data, Indirect Fired, Pine)	0.78
PM_{10}		0.022	Assumed PM_{10} emissions are equivalent to PM emissions.	0.78
$PM_{2.5}$		0.011	Assumed $PM_{2.5}$ emissions are equivalent to 50% of PM_{10} emissions.	0.39

DRIED SAWDUST

Potential emissions from the dried sawdust storage and loading (DS-1) are calculated based on the sawdust dryer production of 19,034 tons of dried sawdust per year. Emission factors for PM are taken from an ADEQ memorandum: *Updated PM and PM_{10} Emissions from Bins and Loadout of Wood Chips, Wood Shavings, and Bark* (8/22/03). The emission factor for $PM_{2.5}$ is assumed to be 50% of the PM_{10} emission factor. This assumption is consistent with guidance provided by Oregon

DEQ, *Guidance Document AQ-EF08* (08/2011). At 12% moisture content, the dried sawdust properties are closer to planer shavings than green sawdust. Therefore, emissions from DS-1 are calculated using the dried shavings emission factors.

Emission Factors for Dried Sawdust

Description	Pollutant	Storage Factor	Loading Factor	Units
Dried Shavings	PM	0.00110	0.00220	lb/ton-wood processed
	PM_{10}	0.00009	0.00018	
	$PM_{2.5}$	0.00005	0.00009	

PTE – Dried Sawdust (DS-1)

Pollutant	Storage	Loading	Totals
	TPY	TPY	TPY
PM	0.010	0.021	0.031
PM_{10}	0.001	0.002	0.003
$PM_{2.5}$	<0.001	0.001	0.001

TRUCK TRAFFIC

Raw materials, byproducts, and finished products are transported on haul roads. Since the logs, chips, bark, shavings, and lumber throughputs are not affected by this project, only the emissions from transporting sawdust were evaluated. Emissions from haul roads are estimated using Equation 1a for unpaved haul roads from AP-42 (11/06), Section 13.2-2, a mean silt content of 8.4, the given vehicle weights, and the number of vehicle miles traveled. The facility has proposed to use basic watering as control (Option 1 from the Utah DEQ guidelines: *Emission Factors for Paved and Unpaved Haul Roads* (1/12/15) which requires basic watering with a 70% control efficiency).

Truck Traffic Details

Description	Annual Material Throughput (TPY)	Max Material Weight (tons/truck)	Annual VMT
Sawdust	66,717[(1)]	18.5	3,894

[(1)] Based on the maximum facility production capacity of 190.62 MMBf/yr.

PTE - Haul Roads (HR-1)

Material	Emission Factors (lb/VMT)			Uncontrolled Emissions (TPY)			Controlled Emissions (TPY)		
	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
Sawdust	9.87	2.81	0.28	19.22	5.47	0.55	5.76	1.64	0.16

Step 3 – Compare the emissions increase to the significance level for each pollutant

The total project emissions increases were estimated by subtracting the BAE from the PAE/PTE. The total project emissions increases are shown in the following table and compared to the PSD significant emission rates (SER) to identify pollutants that trigger further review.

Emissions Increases

Pollutant	PAE/PTE	BAE	Emissions Increases [1]	PSD SER	PSD Triggered?
	TPY	TPY	TPY	TPY	
NO_X	59.71	39.14	20.57	40	No
CO	45.45	106.76	-61.31	100	No
VOC	199.00	159.90	39.10	40	No
Total PM [2]	37.49	62.52	-25.03	25	No
PM_{10} [2]	20.69	55.40	-34.71	15	No
$PM_{2.5}$ [2]	15.97	47.90	-31.93	10	No
SO_2	0.26	4.45	-4.19	40	No

[1] – Emissions increases are calculated by subtracting the BAE from the PAE/PTE.
[2] – Emissions include both filterable and condensable PM.

The emission increases for all criteria pollutants have been determined to be less than PSD significance levels, therefore further PSD review is not required. Teal-Jones states that this PSD significance analysis was done based on conservative estimates and an increase in actual emissions is not expected to occur from the project. The compliance requirement of Specific Condition 1. EUG 3A B. for monitoring and recording of monthly and 12-month rolling total production from the Batch Kiln drying will suffice to verify that the projected board footage rate of 71 MMBf/yr from the baseline period is not exceeded for a period of five years.

SECTION VIII. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the permit application are duplicated below. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions.

(1) Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons per day, averaged over a 30-day period*. The facility has a 2,500-gallon diesel tank on-site for facility vehicle use. The throughput expected for the diesel tank is significantly less than 2,175 gallons per day, averaged over a 30-day period. Potential emissions are estimated using EPA TANKS 4.0.9d summarized below.

EU	Tank Volume (gal)	Throughput (gpy)	Fuel Type	VOC (TPY)
DT-1	2,500	2,500	Distillate Fuel No. 2	0.001

(2) Cold degreasing operations utilizing solvents that are denser than air.

SECTION IX. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations listed in OAC 252:100, Appendix Q. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in "attainment" of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Required annual information (Turn-Around Document) shall be provided to Air Quality.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one HAP or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for single HAP that the EPA may establish by rule

After construction, this modification will be incorporated into the facility's Title V permit. Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources at the facility are established in the permit.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning units based on the maximum heat input, except as provided in Sections 19-10, 19-11, and 19-12. PM emissions from fuel-burning equipment with a maximum heat input of 10 MMBTUH or less shall not exceed 0.6 lb/MMBTU. PM emissions for indirect fired fuel-burning units with a maximum heat input greater than 10 MMBTUH but less than 1,000 MMBTUH are calculated using the following formula:

$$E = 1.042808X^{-0.238561}$$

Where:

E = allowable PM emissions (lb/MMBTU) and
X = the maximum heat input.

For external combustion units burning natural gas, AP-42 (7/98), Section 1.4, lists the total PM emissions for natural gas to be 7.6 lb/MMft^3 or about 0.0076 lb/MMBTU. CDK-1, SD-1, and SD-2 are considered direct fired fuel burning units and are regulated under Section 19-12.

EU-Point	Equipment	Maximum Heat Input (MMBTUH)	Emissions (lbs/MMBTU)	
			Appendix C	Potential
NGB-1	Natural Gas-Fired Boiler No. 1	50.4	0.41	0.01
NGB-2	Natural Gas-Fired Boiler No. 2	50.4	0.41	0.01

Section 19-10 regulates emissions of PM from any new or existing indirectly fired fuel-burning units combusting wood fuel. PM emissions from indirectly fired fuel-burning units combusting wood fuel with a maximum heat input of 10 MMBTUH or less shall not exceed 0.6 lb/MMBTU. PM emissions from indirectly fired fuel-burning units combusting wood fuel with a maximum heat input greater than 10 MMBTUH but less than 1,000 MMBTUH shall not exceed 0.5 lb/MMBTU. There are no indirectly fired fuel-burning units combusting wood fuel at the facility. Therefore, this section is not applicable.

Section 19-11 limits PM emissions from any combined wood fuel and fossil fuel fired steam generating units with a maximum design heat input of 250 MMBTUH which commenced construction after March 4, 1978, to 0.1 lb/MMBTU. The steam generating units at the facility have a maximum design heat input of less than 2,350 MMBTUH. Therefore, this section is not applicable.

Section 19-12 regulates emissions of PM from any new or existing direct fired fuel-burning unit and any emission point in an industrial process based on process weight rate.

PM emissions for process weights of 30 tons per hour (TPH) or less are calculated using the following formula:

$$E = 4.10P^{0.67}$$

PM emissions for process weights greater than 30 TPH are calculated using the following formula:

$$E = (55.0P^{0.11})-40$$

Where:

E = allowable PM emissions (lb/hr) and
P = process weight rate in TPH.

The following table lists the applicable direct fired fuel-burning units or industrial process, process weight rate, PM emission limit and calculated PM emissions. All emission points are in compliance with the applicable PM emission limit.

Process	Weight Rate (TPH)	PM Limit (lb/hr)	PM Emissions (lb/hr)
LD-1	109	52.15	0.13
C-1	43	43.18	0.05
SM-1	101	51.38	3.63
PM-1 (Cyclone-1)	53	45.12	4.75
K-1	7.4	15.67	0.09
K-2	7.4	15.67	0.09
K-3	4.4	11.06	0.05
K-4	4.4	11.06	0.05
CDK-1	22	32.52	2.06
CB-1	43	43.18	0.05
SB-1	7.2	15.39	0.02
SP-1	43	43.18	0.06
SP-2	0.8	3.53	0.01
SP-3	9.3	18.27	0.01
SD-1	13.0(1)	22.86	13.46
SD-2	7.3(2)	15.53	7.50

(1) Based on the process weight rate of 6.1 ODT per hour and 12% moisture content sawdust, 41% additional water content within the green sawdust.
(2) Based on the process weight rate of 3.4 ODT per hour and 12% moisture content sawdust, 41% additional water content within the green sawdust.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Any unit subject to an opacity limit promulgated under NSPS is exempt from this subchapter. All of the emission units are subject to this subchapter.

When burning natural gas in CDK-1, NGB-1, and NGB-2, there is little possibility of exceeding the opacity standards. The permit includes throughput limitations and implementation and proper operation and maintenance of controls to ensure that the source remains in compliance with this

subchapter. There is a possibility of the sawdust dryers exceeding these standards. The permit will require weekly observation of the dryer stacks. If visible emissions are detected, the permit will require opacity readings to be conducted using Method 9.

OAC 252:100-29 (Fugitive Dust) [Applicable]
No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Sources of fugitive dust are required to take reasonable precautions to minimize or prevent pollution. This facility has multiple sources of fugitive dust (stock piles, roadways, etc.). Most of the materials handled are wood/wood waste, therefore non-brittle and not very susceptible to becoming fugitive dust. Haul roads are watered to minimize emissions of fugitive dust. The permit will require the facility to use reasonable precautions to limit fugitive dust to ensure that the source remains in compliance with this subchapter.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 limits the ambient air concentration of H_2S emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 $\mu g/m^3$. This facility does not have any significant source of H_2S emissions.

Part 5, Section 31-25, limits SO_2 emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb SO_2/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of 1,000 BTU/SCF, this limit corresponds to fuel sulfur content of 1,203 ppmv. CDK-1, NGB-1, and NGB-2 are natural gas-fired. The permit requires the use of commercial grade natural gas in CDK-1, NGB-1, and NGB-2 with a sulfur content of less than 4 ppmv to ensure compliance with Subchapter 31. For solid fuels the limit is 1.2 lb SO_2/MMBTU heat input. For wood having a gross calorific value of 4,623 BTU/lb, this limit corresponds to fuel sulfur content of 0.278%. The two green sawdust dryers (SD-1 and SD-2) are subject to this section.

The requirements of this section apply to any fuel-burning equipment that uses an alternative fuel unless another limit representing BACT or equivalent is specified in the source's permit. Use of an alternative fuel in fuel-burning equipment is allowed, provided its use is authorized under an enforceable permit. Use of an alternative fuel in fuel-burning equipment is subject to any applicable restrictions or prohibitions that may exist in other provisions of state or federal statutes or rules, e.g., OAC 252:100-8-32.1, 252:100-31-7, 252:100-42, and/or 40 CFR Parts 60, 61, and/or 63. “Alternative fuel” means fuel derived from any source other than petroleum, natural gas, or coal. Alternative fuel includes, but is not limited to, biogas, waste-derived fuel, recycled tires, tire-derived fuel, and wood fuel as defined in OAC 252:100-19-1.

The two green sawdust dryers (SD-1 and SD-2) will be authorized to combust alternative solid fuel, as defined in the subchapter. SO_2 emissions from the dryers are expected to be negligible, which is in compliance with this subchapter. The permit requires the use of sawdust in the green sawdust dryers to ensure compliance with Subchapter 31.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits emissions of NO_X from new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH. Fore gas fired units, the limit is 0.20 lb/MMBTU, 3-hr average. The two (2) new natural gas-fired boilers (NGB-1 and NGB-2) are subject to this subchapter. The boilers are estimated to have worst-case emissions at 0.084 lb/MMBTU per the vendor and are therefore in compliance with this subchapter. No other fuel-burning equipment has a heat input greater than or equal to 50 MMBTUH.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds) [Parts 3 and 7 are Applicable]
Part 3, Section 15(b), requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The facility has two (2) fuel storage tanks which exceed the capacity of 400-gallons. The gasoline storage tank (GT-1) is equipped with a submerged fill pipe. The diesel storage tank (DT-1) is exempt because it stores a liquid with vapor pressure below 1.5 psia. The facility is in compliance with the requirements.
Part 3, Section 16(b), requires VOC loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. The tanks filled by the gasoline storage tank have capacities of less than 200 gallons. Therefore, this requirement is not applicable.
Part 5, Section 25, limits the VOC content of coatings from any coating line or other coating operation. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is exempt.
Part 7, Section 36, requires fuel-burning and refuse-burning equipment to be cleaned, operated, and maintained so as to minimize VOC emissions. Based on manufacturer's data and good engineering practice, the equipment must not be overloaded and temperature and available air must be sufficient to provide essentially complete combustion.

OAC 252:100-39 (Organic Compounds, Nonattainment Areas) [Not Applicable]
This subchapter imposes additional conditions beyond those of Subchapter 37 on emissions of organic materials from new and existing facilities in Tulsa and Oklahoma Counties. This facility is not located in Tulsa or Oklahoma County.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates TAC that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

Each emissions unit must be evaluated for periodic testing in accordance with the Periodic Testing Standardization guidance issued December 1, 2011, on a pollutant by pollutant basis. The frequency of the periodic testing requirement is based on the quantity of the pollutant emitted. Periodic testing requirements are not required for an emission unit that is subject to an applicable requirement that already requires periodic testing, continuous emission monitoring (CEM), or predictive emission monitoring (PEMS). For this facility, VOC emissions from the kilns are the only pollutants and emission units which are potentially subject to the periodic testing requirements. All other pollutants emitted from this facility are less than 40 TPY per unit.

Periodic Testing Review

EU	Pollutant	TPY	Current Monitoring	Periodic Testing
LD-1	VOC	4.61	None	NO [1]
	PM_{10}	0.21	None	NO [2]
	$PM_{2.5}$	0.11	None	NO [2]
C-1	VOC	45.97	None	NO [1]
	PM_{10}	0.08	None	NO [2]
	$PM_{2.5}$	0.04	None	NO [2]
SM-1	VOC	10.05	None	NO [1]
	PM_{10}	1.09	Opacity	NO [3]
	$PM_{2.5}$	0.54	Opacity	NO [3]
PM-1	VOC	8.97	None	NO [1]
	PM_{10}	4.53	Opacity	NO [4]
	$PM_{2.5}$	2.26	Opacity	NO [3]
NGB-1	NO_X	18.55	None	NO [1]
	VOC	1.19	None	NO [1]
	CO	8.07	None	NO [1]
	SO_2	0.13	None	NO [1]
	PM_{10}	1.64	None	NO [1]
	$PM_{2.5}$	1.64	None	NO [1]

EU	Pollutant	TPY	Current Monitoring	Periodic Testing
NGB-2	NO_X	18.55	None	NO [1]
	VOC	1.19	None	NO [1]
	CO	8.07	None	NO [1]
	SO_2	0.13	None	NO [1]
	PM_{10}	1.64	None	NO [1]
	$PM_{2.5}$	1.64	None	NO [1]
K-1	VOC	50.02	None	NO [5]
	PM_{10}	0.25	None	NO [1]
	$PM_{2.5}$	0.12	None	NO [1]
K-2	VOC	50.02	None	NO [5]
	PM_{10}	0.25	None	NO [1]
	$PM_{2.5}$	0.12	None	NO [1]
K-3	VOC	50.02	None	NO [5]
	PM_{10}	0.25	None	NO [1]
	$PM_{2.5}$	0.12	None	NO [1]
K-4	VOC	50.02	None	NO [5]
	PM_{10}	0.25	None	NO [1]
	$PM_{2.5}$	0.12	None	NO [1]
CDK-1	NO_X	8.51	None	NO [1]
	VOC	239.15	State BACT Requirements [6]	NA [7]
	CO	20.7	None	NO [1]
	SO_2	0.04	None	NO [1]
	PM_{10}	7	None	NO [1]
	$PM_{2.5}$	3.5	None	NO [1]
CB-1	PM_{10}	0.02	None	NO [1]
	$PM_{2.5}$	0.01	None	NO [1]
SB-1	PM_{10}	0.01	None	NO [1]
	$PM_{2.5}$	0.01	None	NO [1]
SP-1, 2, & 3	PM_{10}	0.31	None	NO [1]
	$PM_{2.5}$	0.05	None	NO [1]
GT-1	VOC	0.13	None	NO [1]
HR-1	PM_{10}	24.43	None	NO [1]
	$PM_{2.5}$	2.44	None	NO [1]
SD-1 & 2	NO_X	22.61	None	NO [1]
	VOC	39.74	None	NO [1]
	CO	29.31	None	NO [1]
	PM_{10}	14.99	Opacity	NO [1]
	$PM_{2.5}$	12.14	Opacity	NO [1]

[1] – This unit has potential emissions less than 40 TPY. Periodic testing is not warranted;

[2] – This unit has pre-control emissions < 100 TPY and permitted emissions < 40 TPY. Periodic testing is not warranted;

[3] – This unit has pre-control emissions < 100 TPY and permitted emissions < 40 TPY. Current monitoring requirements sufficiently assure compliance with the terms and conditions of the permit. Periodic testing is not warranted;

[4] – This unit has pre-control emissions > 100 TPY and permitted emissions < 40 TPY. Current monitoring requirements sufficiently assure compliance with the terms and conditions of the permit. Periodic testing is not warranted;

[5] – These units are limited to a combined uncontrolled limit of 200.07 TPY VOC. No individual kiln unit could emit > 100 TPY VOC. Periodic testing is not warranted;

[6] – State BACT Requirements include, at a minimum that the facility will monitor and operate CDK-1 in accordance with the following best operating practices:

(a) Maintain proper kiln maintenance;
(b) Maintain Proper kiln operation to minimize over-drying of lumber;
(c) Complete periodic verification of proper temperature sensor operation;
(d) Complete periodic verification of proper fan operation;
(e) Maintain average kiln temperature below 250 °F; and
(f) Maintain proper stacking of lumber using kiln sticks for efficient and even kiln drying.

The facility will also demonstrate compliance with the VOC emission rate from the CDK-1 indirectly by measuring the moisture content of the lumber just after the lumber exits the kiln or in the planer mill at least once/month and verify the 12-month rolling average final lumber moisture content is equal to or greater than 11%;

[7] – Testing is not recommended on the kilns at this time due to infeasibility, including but not limited to constraints on the kilns such as maintaining the minimum flow-rate required.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-7	Minor Facilities	not in source category
OAC 252:100-11	Alternative Emissions Reduction	not eligible
OAC 252:100-15	Mobile (Motor Vehicle) Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Elevators	not in source category
OAC 252:100-39	Nonattainment Areas	not in applicable county
OAC 252:100-47	Municipal Solid Waste Landfills	not in source category

SECTION X. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable for this Permit Action]

Total potential emissions of VOC are greater than the major source threshold of 250 TPY. Any future increases of emissions must be evaluated for PSD if they exceed a significance level (40 TPY NO_X, 100 TPY CO, 40 TPY VOC, 40 TPY SO_2, 25 TPY PM, 15 TPY PM_{10}, 10 TPY $PM_{2.5}$, 75 KTPY CO_{2e}). The project emission increases for all criteria pollutants have been determined to be less than PSD significance levels (detailed in Section VII of the Memorandum). Teal-Jones states that the PSD significance analysis was done based on conservative estimates and an increase in actual emissions is not expected to occur from the project.

NSPS, 40 CFR Part 60 [Subpart Dc is Applicable]

Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects industrial-commercial-institutional steam generating units with a design capacity between 10 and 100 MMBTUH heat input and which commenced construction or modification after June 9, 1989. The two 50.4 MMBTUH natural gas-fired boilers (NGB-1 and NGB-2) will be constructed after June 9, 1989, and are affected facilities. Since the affected units will only combust natural gas, there are no emission standards that are applicable under this subpart. The facility is required to keep and maintain records of the amount of fuel combusted each calendar month, or the total amount of each steam generating unit fuel delivered to that property during each calendar month. The sawdust dryer burners provide direct heat to the dryers (SD-1 and SD-2) with the combustion gases contacting the sawdust being dried; therefore, they are not subject to this subpart.

Subpart Kb, Volatile Organic Liquid (VOL) Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This subpart affects VOL storage tanks with a capacity above 19,813 gallons. The capacities of the two storage vessels at this facility are below the de minimis threshold and are not subject to this subpart.

Subpart BB, Kraft Pulp Mills. This facility is not a Kraft Pulp Mill.

Subpart BBa, Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction, or Modification Commenced After May 23, 2013. This facility is not a Kraft Pulp Mill.

Subpart IIII, Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). There are no CI-ICE located at this facility.

Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines (ICE). There are no SI-ICE located at this facility.

NESHAP, 40 CFR Part 61 [Not Applicable]
There are no emissions of any of the pollutants subject to 40 CFR 61 except for trace amounts of benzene and arsenic. Subpart J affects process streams which are more than 10% by weight benzene. None of the subparts in Part 61 affect wood-waste combustion.

NESHAP, 40 CFR Part 63 [Subparts DDDD and DDDDD are Applicable]
Subpart DDDD, Plywood and Composite Wood Products. This subpart establishes national compliance options, operating requirements, and work practice requirements for HAP emitted from plywood and composite wood products (PCWP) manufacturing facilities. Per §63.2292, PCWP manufacturing facility includes lumber kilns located at any facility. Therefore, this facility is considered a PCWP manufacturing facility. The affected source includes lumber kilns. Process units not subject to compliance options or work practice requirements specified in §63.2240 (including, but not limited to, lumber kilns), are only required to comply with the initial notification requirements of §63.9(b). This facility is subject to this subpart. All applicable requirements were incorporated into the permit.

Subpart QQQQ, Surface Coating of Wood Building Products. The facility does not apply any coating as defined in this subpart to wood building products.

Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines (RICE). There are no RICE located at this facility.

Subpart DDDDD, Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters. This subpart establishes emission limitations and work practice standards for industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards. A boiler or process heater is new or reconstructed if construction or reconstruction of the boiler or process heater commenced on or

after June 4, 2010. The natural gas-fired boilers (NGB-1 and NGB-2) are new sources and must comply with the requirements upon actual start-up.

Unit(s) designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory must conduct tune-ups as a work practice for all regulated emissions under Subpart DDDDD as indicated:

Heat Input Capacity	**Tune-up**
≤ 5 MMBTUH	Every 5 years
> 5 MMBTUH < 10 MMBTUH	Every 2 years
> 10 MMBTUH Without O_2 Trim System	Annually
> 10 MMBTUH With O_2 Trim System	Every 5 years
Limited Use	Every 5 years

Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 of Subpart DDDDD, or the operating limits in Table 4 of Subpart DDDDD.

Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 of Subpart DDDD, the annual tune-up, or the energy assessment requirements in Table 3 of Subpart DDDDD, or the operating limits in Table 4 of Subpart DDDDD. Limited-use boiler or process heater means any boiler or process heater that has a federally enforceable average annual capacity factor of no more than 10 percent.

NGB-1 and NGB-2 have heat input capacities greater than 10 MMBTUH and are not equipped with continuous oxygen trim systems and so, per §63.7540(a)(10), each must complete a tune-up initially and annually. NGB-1 and NGB-2 only burn gas 1 fuels subcategory and are therefore not subject to the emission or operating limits in this subpart. All applicable requirements have been incorporated into the permit.

Subpart CCCCCC, Gasoline Dispensing Facilities (GDF). This subpart establishes emission limitations and management practices for loading of gasoline storage tanks at GDF located at an area source of HAP. The facility is a major source of HAP and is not subject to this subpart.

Subpart JJJJJJ, Industrial, Commercial, and Institutional Boilers Area Sources. This subpart establishes emission limitations, work practice standards, emission reduction measures, and management practices for industrial, commercial, and institutional boilers located at area sources of HAP. This facility is a major source of HAP and is subject to Subpart DDDDD.

CAM, 40 CFR Part 64 [Not Applicable]

Compliance Assurance Monitoring (CAM), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, which is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant greater than major source levels.

The Planer Mill uses a cyclone to control emissions. However, emissions prior to the control device are not greater than the major source threshold. Therefore, the Planer Mill is not subject to this part. Furthermore, the company has stated that the cyclone is considered inherent process equipment because its main purpose is material recovery and it is not a control device.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
This facility will not store more than the threshold quantity of any regulated substance. More information on this federal program is available on the web page: *www.epa.gov/rmp*.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subparts A and F are Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).
Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

The standard conditions of the permit address the requirements specified at § 82.156 for persons opening appliances for maintenance, service, repair, or disposal; § 82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; § 82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; § 82.166 for recordkeeping; § 82.158 for leak repair requirements; and §

82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

SECTION XI. COMPLIANCE

TIER CLASSIFICATION

The application for this permit has been determined to be a **Tier II** based on the request for a major source construction permit for a significant modification to an existing major source permit. The applicant has requested to process the construction permit through the Enhanced NSR process. Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: www.deq.ok.gov/.

LANDOWNER AFFIDAVIT

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant has a current lease to accomplish the permitted purpose.

PUBLIC AND EPA REVIEW

The applicant published the "Notice of Filing a Tier II Application" in The Antlers American, a weekly publication in Pushmataha County on September 23, 2021. The notice stated that the application was available for review at the Antlers Public Library in Pushmataha County, and also at the Air Quality Division's main office in Oklahoma City. The information on all permit actions is available for review by the public in the Air Quality section of the DEQ web page at http://www.deq.ok.gov.

The applicant requested and was granted concurrent public and EPA review periods. The draft/proposed permit will undergo a 30-day public comment period and the draft/proposed permit will be sent to EPA for a 45-day review period. If no comments are received from the public, the draft/proposed permit will be deemed the proposed permit. The EPA review period may be extended so that the EPA review period does not end before the public review period ends. The facility is located in the Pushmataha County; therefore, the Cherokee Nation will be notified of the draft permit.

If the Administrator does not object in writing during the 45-day EPA review period, any person that meets the requirements of OAC 252:100-8-8(j) may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection. Any such petition shall be based only on objections to the permit that the petitioner raised with reasonable specificity during the public comment period provided for in 27A O.S. § 2-14-302.A.2., unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period. If the Administrator objects to the permit as a result of a petition filed under OAC 252:100-8-8(j), the DEQ shall not issue the permit until EPA's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the 45-day review period and prior to an EPA objection. If the DEQ has issued a permit prior to receipt of an EPA objection under OAC 252:100-8-8(j), the DEQ will modify, terminate, or revoke such permit, and shall do so consistent with the procedures in 40 CFR §§ 70.7(g)(4) or (5)(i) and (ii) except in

unusual circumstances. If the DEQ revokes the permit, it may thereafter issue only a revised permit that satisfies EPA's objection. In any case, the source will not be in violation of the requirement to have submitted a timely and complete application.

FEES PAID

The major source construction permit application fee of $5,000 was paid on September 15, 2021.

INSPECTION

An off-site full compliance inspection was conducted on May 28, 2021, by Stephen Statum, Environmental Programs Specialists for the Department of Environmental Quality ("DEQ"). The inspection was conducted via phone and email to acquire required documentation and information necessary to complete the FCE. Based on a review of facility records, one (1) violation was identified. Teal-Jones operated in violation of OAC 252:100-8-1.3(a) and Authorization to Operate Permit No. 2017-0446-TV Specific Condition 4.P by failing to maintain a log of water truck usage on unpaved roads for the period beginning February 12, 2020, through June 30, 2020. However, Teal-Jones discovered and reported the deviation in SAR 10168. The facility conducted employee training to ensure future compliance and has maintained the required records since. No further action is necessary at this time.

SECTION XII. SUMMARY

The facility has demonstrated the ability to comply with all applicable Air Quality rules and regulations. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues that would prevent issuance of the permit. Issuance of the construction permit is recommended, contingent on Public and EPA Review.

PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2017-0446-C (M-2)

Teal Jones Lumber, LLC,

having compiled with the requirements of the law, is hereby granted permission to construct the Antlers Sawmill located in Section 26, Township 4S, Range 16E in Pushmataha County, Oklahoma, subject to standard conditions dated June 21, 2016, and specific conditions, both of which are attached.

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

DRAFT/PROPOSED

Kendal Stegmann, Division Director **Date**
Air Quality Division

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Teal Jones Lumber, LLC
Attn. Mr. Dan Anderson
P.O. Box 129
Antlers, OK 74523

SUBJECT: Permit No. **2017-0446-C (M-2)**
Teal Jones Lumber, LLC
Antlers Sawmill (SIC 2421/ NAICS 321113)
Facility ID: 5096
Section 26, Township 4S, Range 16E, Pushmataha County, Oklahoma

Dear Mr. Anderson:

Air Quality has received the permit application for the referenced facility and completed initial review. This application has been determined to be a Tier II application. In accordance with 27A O.S. 2-14-301 and 302 and OAC 252:4-7-13(c), the enclosed draft permit is now ready for public review. The requirements for public review of the draft permit include the following steps, which **you** must accomplish:

1. Publish at least one legal notice (one day) in at least one newspaper of general circulation within the county where the facility is located (Instructions enclosed);
2. Submit sample notice and provide date of publication to **AQD 5 days prior to notice publishing;**
3. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft permit at a convenient location (preferentially at a public location) within the county of the facility;
4. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft permit. Any additional comments or requested changes you have for the draft permit or the application should be submitted within 30 days of publication.

The permit will be placed into pending facility action until the notice of draft permit is published. Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me or the permit writer at (405) 702-4100.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

NOTICE OF DRAFT PERMIT
TIER II or TIER III AIR QUALITY PERMIT APPLICATION

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II or Tier III draft permit has been prepared by DEQ. The notice must be published in one newspaper local to the site or facility. Note that if either the applicant or the public requests a public meeting, this must be arranged by the DEQ.

1. Complete the public notice using the samples provided by AQD below. Please use the version applicable to the requested permit action;
   Version 1 – Traditional NSR process for a construction permit
   Version 2 – Enhanced NSR process for a construction permit
   Version 3 – initial Title V (Part 70 Source) operating permit, Title V operating permit renewal, Significant Modification to a Title V operating permit, and any Title V operating permit modification incorporating a construction permit that followed Traditional NSR process
2. Determine appropriate newspaper local to facility for publishing;
3. Submit sample notice and provide date of publication to AQD 5 days prior to notice publishing;
4. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD within 20 days of publication.

REQUIRED CONTENT (27A O.S. § 2-14-302 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III draft permit has been prepared by DEQ;
2. Name and address of the applicant;
3. Name, address, driving directions, legal description and county of the site or facility;
4. The type of permit or permit action being sought;
5. A description of activities to be regulated, including an estimate of emissions from the facility;
6. Location(s) where the application and draft permit may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant;
9. A 30-day opportunity to request a formal public meeting on the draft permit.

SAMPLE NOTICE:

DEQ NOTICE OF TIER *…II or III…* **DRAFT PERMIT**

A Tier *…II or III…* **application for an air quality construction permit for a modification at an existing major facility has been filed with the Oklahoma Department of Environmental Quality (DEQ) by applicant,** *…name and address.*

The applicant requests approval to *…brief description of purpose of application…* **at the** *…site/facility name … …***[proposed to be] located at** *…physical address (if any), driving directions, and legal description including county….*

In response to the application, DEQ has prepared a draft construction permit (Permit Number: *…xxxx-xxxx-x…***), which may be reviewed at** *…locations (one must be in the county where the site/facility is located)…* **or at the Air Quality Division's main office (see address below). The draft permit is also available for review under Permits for Public Review on the DEQ Web Page: http://www.deq.ok.gov/**

This draft permit would authorize the facility to emit the following regulated pollutants: *(list each pollutant and amounts in tons per year (TPY))***, which represents** (*identify the emissions change (increase or decrease) involved in the modification)***. [**Or add: **The modification will not result in a change in emissions.**] [For PSD permits only, add**: The project will consume the following increment levels:** *(list the amount of increment consumption for each pollutant in ug/m^3).*]

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft permit to the Air Quality Division contact listed below or as directed through the corresponding online notice. Only those issues relevant to the proposed modification(s) are open for comment. A public meeting on the draft permit may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ staff.

In addition to the public comment opportunity offered under this notice, this draft permit is subject to U.S. Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8. The requirements of the construction permit will be incorporated into the Title V operating permit through the administrative amendment process. Therefore, no additional opportunity to provide comments or EPA review, EPA objection, and petitions to EPA will be available to the public when requirements from the construction permit are incorporated into the Title V operating permit.

If the Administrator (EPA) does not object to the proposed permit, the public has 60 days following the Administrator's 45-day review period to petition the Administrator to make such an objection as provided in 40 CFR 70.8(d) and in OAC 252:100-8-8(j).

Information on all permit actions including draft permits, proposed permits, final issued permits and applicable review timelines are available in the Air Quality section of the DEQ Web page: http://www.deq.ok.gov/.

For additional information, contact *…names, addresses and telephone numbers of contact persons for the applicant,* **or contact DEQ at: Chief Engineer, Air Quality Division, 707 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100.**

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Date: December 6, 2021

Choctaw Nation of Oklahoma
Attn: Gary Batton, Chief
P.O. Box 1548
Ada, OK 74821

Re: Permit Application No. 2017-0446-C (M-2)
Teal Jones Lumber, LLC, Facility ID: 5096
Antlers Sawmill (SIC 2421/ NAICS 321113)
Pushmataha County
Date Received: September 13, 2021

Dear Mr. Hoskin:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier II/Tier III application referenced above. A Tier II/III application requires the facility provide a 30-day public comment period on the draft Tier II/III permit and a 20-day public comment period on a proposed Tier III permit at a public location within the county of the facility. The process requires the facility to notify the public by newspaper notice in a newspaper in the county of the proposed project. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to the newspaper notice.

Copies of draft permits and comment opportunities are also provided to the public on the ODEQ website at the following location:

https://www.deq.ok.gov/air-quality-division/air-permits/public-participation-issued-permits/

If you prefer a copy of the draft and/or proposed permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify me by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division
Attn: Phillip Fielder, Chief Engineer
707 N Robinson
Oklahoma City, OK, 73102

Thank you for your cooperation. If you have any questions, I can also be contacted at (405) 702-4185.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

DRAFT/PROPOSED

PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Teal-Jones Lumber, LLC **Facility ID: 5096**
Antlers Sawmill **Permit No. 2017-0446-C (M-2)**

The permittee is authorized to construct in conformity with the specifications submitted to the Air Quality Division on September 13, 2021. The Evaluation Memorandum dated December 6, 2021, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating permit limitations or permit requirements. Commencing construction or operation under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)]

EUG 1 - Debarking and Chipping Operations: LD-1 and C-1. Emissions from the debarking and sawmill chipper equipment are considered fugitive and insignificant.

EU	Point	Description
LD	1	Log Debarker
C	1	Sawmill Chipper (x2)

A. The Log Debarker (LD-1) shall be authorized to operate at a process rate of up to 781,542 tons of logs in any 12-month period. [OAC 252:100-8-6(a)(1)]
B. The Sawmill Chippers (C-1) shall be authorized to operate at a process rate of up to 304,992 tons of chips in any 12-month period. [OAC 252:100-8-6(a)(1)]
C. The amount of logs processed by the Log Debarker and the amount of chips produced by the Saw Mill Chippers shall be monitored and recorded monthly. Compliance with the 12-month throughput limits shall be determined monthly based on a rolling 12-month total. [OAC 252:100-8-6(a)]
D. The Log Debarker shall be conducted in a partially enclosure with three sides and a roof to reduce emissions of particulate matter. [OAC 252:100-29]

EUG 1a - Sawmill and Planer Mill: SM-1 and PM-1. Emission limits for the Sawmill and Planer Mill.

EU	Point	Description	PM_{10}		$PM_{2.5}$	
			lb/hr	TPY	lb/hr	TPY
SM	1	Sawmill	0.30	1.09	0.15	0.54
PM	1	Planer Mill	1.90	4.53	0.95	2.26

A. The Sawmill (SM-1) shall be authorized to operate at a process rate of up to 724,356 tons of logs in any 12-month period. [OAC 252:100-8-6(a)(1)]
B. The Planer Mill (PM-1) shall be authorized to operate at a process rate of up to 251,618 tons of dried lumber in any 12-month period. [OAC 252:100-8-6(a)(1)]

C. The amount of logs processed by the Sawmill (SM-1) and the amount of dried lumber processed by the Planer Mill (PM-1) shall be monitored and recorded monthly. Compliance with the 12-month throughput limits shall be determined monthly based on a rolling 12-month total. [OAC 252:100-8-6(a)]

D. The Sawmill (SM-1) operations shall be conducted in partial enclosures and the enclosures shall be contained inside a fully enclosed building. Door openings should be minimized during material transfer. Fugitive emissions from the building enclosing the Sawmill operations must not exceed zero percent opacity. [OAC 252:100-8-6(a)]

E. All air exhausts from the Planer Mill (PM-1) operations shall be processed by cyclonic separators or equivalent air pollution devices with an efficiency of at least 96% for filterable PM emissions control. [OAC 252:100-8-6(a)(1) & OAC 252:100-19-12]

F. The permittee shall conduct visual observations of emissions from the building enclosing the Sawmill (SM-1) and the Planer Mill cyclone (PM-1) at least once per week, when operating, using Method 22 except as authorized below. In no case shall the observation period be less than six minutes in duration. If visible emissions are observed for six minutes in duration for any observation period and such emissions are not the result of a malfunction, then the permittee shall conduct, for the identified points, within 24 hours, a visual observation of emissions, in accordance with 40 CFR Part 60, Appendix A, Method 9. [OAC 252:100-25]

   i. When four consecutive weekly visible emission observations or Method 9 observations show no visible emissions, or no emissions of a shade or density greater than twenty (20) percent equivalent opacity, respectively, the frequency may be reduced to monthly visual observations, as above. Upon any showing of non-compliance the observation frequency shall revert to weekly.

   ii. If a Method 9 observation exceeds 20% opacity the permittee shall conduct at least two additional Method 9 observations within the next 24-hours.

   iii. If more than one six-minute Method 9 observation exceeds 20% opacity in any consecutive 60 minutes; or more than three six-minute Method 9 observations in any consecutive 24 hours exceeds 20% opacity; or if any six-minute Method 9 observation exceeds 60% opacity; the owner or operator shall comply with the provisions for excess emissions during start-up, shut-down, and malfunction of air pollution control equipment.

EUG 2 – Natural Gas-Fired Boilers: NGB-1 and NGB-2. Emission limits for the Natural Gas-Fired Boilers.

EU-Point	Heat Input Rating	PM_{10}		$PM_{2.5}$		CO		NO_X	
	MMBTUH	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
NGB-1	50.4	0.38	1.64	0.38	1.64	1.84	8.07	4.24	18.55
NGB-2	50.4	0.38	1.64	0.38	1.64	1.84	8.07	4.24	18.55

A. The Natural Gas-Fired Boilers (NGB-1 and NGB-2) shall be fueled with commercial grade natural gas only. Compliance with the sulfur limit on commercial grade natural gas can be shown by the following methods: a current gas company bill, lab analysis, stain-tube

analysis, gas contract, tariff sheet, or other approved methods. Compliance shall be demonstrated at least once per calendar year. [OAC 252:100-31]

B. The Natural Gas-Fired Boilers (NGB-1 and NGB-2) are subject to NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR Part 60, Subpart Dc, and shall comply with all provisions of the subpart including but not limited to the following: [40 CFR §§ 60.40c to 60.48c]

i. § 60.40c Applicability and delegation of authority.
ii. § 60.41c Definitions.
iii. § 60.42c Standard for sulfur dioxide (SO_2).
iv. § 60.43c Standard for particulate matter (PM).
v. § 60.44c Compliance and performance test methods and procedures for sulfur dioxide.
vi. § 60.45c Compliance and performance test methods and procedures for particulate matter.
vii. § 60.46c Emission monitoring for sulfur dioxide.
viii. § 60.47c Emission monitoring for particulate matter.
ix. § 60.48c Reporting and recordkeeping requirements.

C. The Natural Gas-Fired Boilers (NGB-1 and NGB-2) are subject to NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63, Subpart DDDDD, and shall comply with all provisions of the subpart including but not limited to the following:

[40 CFR §§ 63.7480 to 63.7575]

What This Subpart Covers

x. §63.7480 What is the purpose of this subpart?
xi. §63.7485 Am I subject to this subpart?
xii. §63.7490 What is the affected source of this subpart?
xiii. §63.7491 Are any boilers or process heaters not subject to this subpart?
xiv. §63.7495 When do I have to comply with this subpart?

Emission Limitations and Work Practice Standards

xv. §63.7499 What are the subcategories of boilers and process heaters?
xvi. §63.7500 What emission limitations, work practice standards, and operating limits must I meet?

General Compliance Requirements

xvii. §63.7505 What are my general requirements for complying with this subpart?

Testing, Fuel Analyses, and Initial Compliance Requirements

xviii. §63.7510 What are my initial compliance requirements and by what date must I conduct them?
xix. §63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
xx. §63.7520 What stack tests and procedures must I use?
xxi. §63.7521 What fuel analyses, fuel specification, and procedures must I use?
xxii. §63.7525 What are my monitoring, installation, operation, and maintenance requirements?

xxiii. §63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

Continuous Compliance Requirements

xxiv. §63.7535 Is there a minimum amount of monitoring data I must obtain?

xxv. §63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

Notification, Reports, and Records

xxvi. §63.7545 What notifications must I submit and when?

xxvii. §63.7550 What reports must I submit and when?

xxviii. §63.7555 What records must I keep?

xxix. §63.7560 In what form and how long must I keep my records?

Other Requirements and Information

xxx. §63.7565 What parts of the General Provisions apply to me?

xxxi. §63.7570 Who implements and enforces this subpart?

xxxii. §63.7575 What definitions apply to this subpart?

EUG 3A - Batch Drying Kilns: K-1, K-2, K-3, and K-4. Emission limits for the Batch Drying Kilns.

	VOC	
EU/Point	**lb/hr**	**TPY**
K-1	17.30	200.07
K-2	17.30	
K-3	10.27	
K-4	10.27	

A. Throughput of Batch Drying Kilns (K-1, K-2, K-3, and K-4) shall not exceed a combined total production rate of 90,620,000 board feet of lumber in any 12-month period. [OAC 252:100-8-6(a)(1)]

B. The amount of lumber dried in the Batch Drying Kilns shall be monitored and recorded monthly. Compliance with the 12-month throughput limit shall be determined monthly based on a rolling 12-month total. [OAC 252:100-8-6(a)]

EUG 3B - Continuous Drying Kiln: CDK-1. Emission limits for the Continuous Drying Kiln.

	VOC		PM_{10}		$PM_{2.5}$	
EU/Point	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
CDK-1	70.41	239.15	2.06	7.00	1.03	3.50

A. Throughput of Continuous Drying Kiln (CDK-1) shall not exceed 100,000,000 board feet of lumber in any 12-month period. [OAC 252:100-8-6(a)(1)]

B. The amount of lumber dried in the Continuous Drying Kiln (CDK-1) shall be monitored and recorded monthly. Compliance with the 12-month throughput limit shall be determined monthly based on a rolling 12-month total. [OAC 252:100-8-6(a)]

C. VOC (WPP1) emissions from the Continuous Drying Kiln (CDK-1) shall not exceed 4.78 lb/MBf. Compliance shall be determined using the methods of EPA Guidance: *Interim VOC Measurement Protocol for the Wood Products Industry* (7/07). [OAC 252:100-8-5(d)(1)(A)]

D. At a minimum, the facility will monitor and operate the Continuous Drying Kiln (CDK-1) in accordance with the following best operating practices: [OAC 252:100-8-5(d)(1)(A)]

i. Maintain proper kiln maintenance;
ii. Maintain Proper kiln operation to minimize over-drying of lumber:
iii. Complete periodic verification of proper temperature sensor operation (annually);
iv. Complete periodic verification of proper fan operation (annually);
v. Maintain average kiln temperature below 250 °F; and
vi. Maintain proper stacking of lumber using kiln sticks for efficient and even kiln drying.

E. The facility shall demonstrate compliance with the VOC emission rate from the Continuous Drying Kiln (CDK-1) indirectly by measuring the moisture content of the lumber just after the lumber exits the kiln or in the planer mill at least once/month and verify the 12-month rolling average final lumber moisture content is equal to or greater than 11%. [OAC 252:100-8-5(d)(1)(A)]

F. The Continuous Drying Kiln (CDK-1) shall be fired with commercial grade natural gas or other gaseous fuel with a sulfur content less than 4 ppmv. [OAC 252:100-31-25]

EUG 4 - Byproduct Storage Bins: SB-1, CB-1, and DS-1. Emissions from the Byproduct Storage Bins are considered insignificant.

EU	Point	Description
SB	1	Shavings Storage Bin
CB	1	Chip Storage Bin
DS	1	Dried Sawdust

EUG 4A - Byproduct Storage Piles: SP-1, SP-2, and SP-3. Emissions from the storage piles are considered fugitive and insignificant.

EU	Point	Description
SP	1	Chip Overflow Storage Pile
SP	2	Bark Storage Pile
SP	3	Sawdust Storage Pile

A. Reasonable precautions shall be taken to minimize fugitive dust emissions from all activities. These precautions shall include, but not be limited to the following measures: [OAC 252:100-29]

i. Use of water on stockpiles and materials as needed during transfer operations. The stockpiles shall be watered for control of dust as needed.
ii. Application of other coatings or coverings to substances susceptible to becoming airborne or wind-borne.
iii. Planting and maintaining vegetation coverings or windbreaks where necessary to prevent blowing dust.

iv. Locating stockpiles as to provide minimum exposure to prevent blowing dust from leaving the property line.
v. Curtailing operations to the extent necessary to comply with the standards and emission limitations.

EUG 5 - Storage Tanks: GT-1. Emissions from the gasoline storage tank are considered insignificant.

EU	Point	Description
GT	1	500-gal Gasoline Tank (AST)

A. The gasoline storage tank shall be equipped with a submerged fill pipe.
[OAC 252:100-37-15(b)]

EUG 6 - Haul Roads: Emissions from the haul roads are considered fugitive.

EU	Point	Description	VMT/year
HR	1	Unpaved Haul Roads	56,094

A. Reasonable precautions shall be taken to minimize fugitive dust emissions from all activities. These precautions shall include, but not be limited to the following measures:
[OAC 252:100-29]

i. The paved roads, unpaved roads, and traffic areas shall be watered for control of dust on any day with less than one quarter (1/4) inch of rain, or as needed to meet the opacity requirements of Subchapter 29.
ii. Application of other coatings or coverings to substances susceptible to becoming airborne or wind-borne.
iii. Planting and maintaining vegetation coverings or windbreaks where necessary to prevent blowing dust.
iv. Curtailing operations to the extent necessary to comply with the standards and emission limitations.

EUG 8 – Green Sawdust Dryers: SD-1 and SD-2. Emission limits for the Green Sawdust Dryers.

	VOC		PM_{10}		$PM_{2.5}$		CO		NOx	
EU/Point	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
SD-1	29.02	39.74	10.95	14.99	8.84	12.14	21.41	29.31	16.51	22.61
SD-2	16.18		6.10		4.93		11.94		9.21	

A. Throughput of Green Sawdust Dryers (SD-1 & SD-2) shall not exceed 16,750 oven dried tons of sawdust produced in any 12-month period. [OAC 252:100-8-6(a)(1)]
B. The amount of sawdust dried in the Green Sawdust Dryers (SD-1 & SD-2) shall be monitored and recorded monthly. Compliance with the 12-month throughput limit shall be determined monthly based on a rolling 12-month total. [OAC 252:100-8-6(a)]

C. The Green Sawdust Dryers (SD-1 & SD-2) shall be fueled with green sawdust only. No bark shall be fired in the burners.
[OAC 252:100-8-6(a), OAC 252:100-19-10, & OAC 252:100-31-25]

D. The permittee shall conduct visual observations of emissions from the Green Sawdust Dryers (SD-1 & SD-2) at least once per week when operating using Method 22, except as authorized below. In no case shall the observation period be less than six minutes in duration. If visible emissions are observed for six minutes in duration for any observation period and such emissions are not the result of a malfunction, then the permittee shall conduct, for the identified points, within 24 hours, a visual observation of emissions, in accordance with 40 CFR Part 60, Appendix A, Method 9. [OAC 252:100-25]

i. When four consecutive weekly visible emission observations or Method 9 observations show no visible emissions, or no emissions of a shade or density greater than twenty (20) percent equivalent opacity, respectively, the frequency may be reduced to monthly visual observations, as above. Upon any showing of non-compliance the observation frequency shall revert to weekly

ii. If a Method 9 observation exceeds 20% opacity the permittee shall conduct at least two additional Method 9 observations within the next 24-hours.

iii. If more than one six-minute Method 9 observation exceeds 20% opacity in any consecutive 60 minutes; or more than three six-minute Method 9 observations in any consecutive 24 hours exceeds 20% opacity; or if any six-minute Method 9 observation exceeds 60% opacity; the owner or operator shall comply with the provisions for excess emissions during start-up, shut-down, and malfunction of air pollution control equipment.

2. EUG 3A and 3B are affected facilities under NESHAP, Plywood and Composite Wood Products, 40 CFR Part 63, Subpart DDDD, and shall comply with all provisions of the subpart including but not limited to the following: [40 CFR §§ 63.2230 to 63.2292]

What This Subpart Covers

A. § 63.2230 What is the purpose of this subpart?
B. § 63.2231 Does this subpart apply to me?
C. § 63.2232 What parts of my plant does this subpart cover?

General Compliance Requirements

D. § 63.2252 What are the requirements for process units that have no control or work practice requirements?

Other Requirements and Information

E. § 63.2292 What definitions apply to this subpart?

3. This facility is considered an existing Prevention of Significant Deterioration (PSD) facility. As such, the facility is subject to the provisions of OAC 252:100-8-36.2(c) for any project as defined therein. The permittee shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the modification and that is emitted by any emissions unit identified; and calculate and maintain a record of the annual emissions, in TPY on a calendar year basis, for a period of 5 years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the modification if it

increases the design capacity or potential to emit of the affected emissions unit. The permittee shall submit a report to the Director if the annual emissions, in TPY, from the modification, exceed the baseline actual emissions (as documented and maintained) by an amount that is significant for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection for that modification. The report shall be submitted to the AQD within 60 days after the end of each year in which the exceedances or difference occurred. The report shall contain the information required by OAC 252:100-8-36.2(c)(5)(A) through (C). If the permittee materially fails to comply with these provisions, then the calendar year emissions are presumed to equal the source's potential to emit. [OAC 252:100-8-36.2(c)]

4. The permittee shall keep records as follows. Required records shall be retained on location for a period of at least five years following dates of recording and shall be made available to regulatory personnel upon request.

   A. Log Debarker production in tons of logs (monthly and 12-month rolling totals);
   B. Sawmill Chippers production in tons of chips (monthly and 12-month rolling totals);
   C. Sawmill production in tons of logs (monthly and 12-month rolling totals);
   D. Planer Mill production in tons of dry-lumber (monthly and 12-month rolling total);
   E. Inspection and maintenance records of Planer Mill cyclone (weekly);
   F. Visible emission observations of Planer Mill cyclone (weekly/monthly);
   G. Records of the amount of fuel combusted for each Natural Gas-Fired Boiler (NGB-1 and NGB-2) (monthly and 12-month rolling totals);
   H. Batch Kilns production in board-feet (monthly and 12-month rolling totals);
   I. Continuous Kiln production in board-feet (monthly and 12-month rolling totals);
   J. Maintenance records of activities of Specific Condition 1, EUG 3B.D (annually);
   K. Records of the average kiln temperature of CDK-1 (daily);
   L. Moisture content of the lumber just after the lumber exits the kiln or in the planer mill (monthly and 12-month rolling average);
   M. Green Sawdust Dryer production in oven dried tons of sawdust produced (monthly and 12-month rolling totals);
   N. Visible emission observations of SD-1 and SD-2 stacks (weekly/monthly);
   O. Records required by NSPS Subpart Dc; and
   P. Records required by NESHAP Subpart DDDDD;
   Q. Log of water truck usage on unpaved roads;
   R. Records as required by OAC 252:100-8-36.2(c).

5. The following records shall be maintained on-site to verify Insignificant Activities. The owner/operator shall be able to keep records on alternative media such as: microfilm, computer files, compact disks, magnetic tape disks, or microfiche, provided it does not conflict with other applicable recordkeeping requirements.

   A. Emissions from fuel storage/dispensing equipment (cumulative annual for diesel).

6. No later than 30 days after each anniversary date of the issuance of the Title V operating permit (February 12, 2020), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this

permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

7. The permittee shall submit an application for a modified Part 70 operating permit within 180 days of commencement of operation.

MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 21, 2016)

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.
[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements.
[OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.
[OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

(1) the date, place and time of sampling or measurement;
(2) the date or dates analyses were performed;
(3) the company or entity which performed the analyses;
(4) the analytical techniques or methods used;
(5) the results of such analyses; and
(6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report. [OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions. [OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act. [OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: “I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.”

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards ("NSPS") under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants ("NESHAPs") under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer's instructions and in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality. [OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM_{10}). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." [OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification. [OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit. [OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit. [OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.
[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.
[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing,

terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances: [OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

(1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
(2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
(3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
(4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d). [OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a “grandfathered source,” as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

(1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
(2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
(3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
(4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

(1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
(2) the permitted facility was at the time being properly operated;

(3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.
[OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

(1) 5 tons per year of any one criteria pollutant.
(2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.
[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.
[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

(1) result in no net emissions increases,
(2) are not modifications under any provision of Title I of the federal Clean Air Act, and
(3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

(1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
(2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
(3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
    (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
    (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
    (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
    (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.
(4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
(5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
(6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or

greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]

(7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

(1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
(2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
(3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBfCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

(1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
(2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158;
(3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
(5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

(1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.

(2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).

(3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).

(4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R.§ 70.8(a) and (c).

(5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.

(6) The DEQ complies with 40 C.F.R. § 70.8(d).

(7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).

(8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.

(9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).

(10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [OAC 252:100-43-6]

SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

Teal Jones Lumber, LLC
Attn. Mr. Dan Anderson
P.O. Box 129
Antlers, OK 74523

SUBJECT: Permit No. **2017-0446-C (M-2)**
Teal Jones Lumber, LLC
Antlers Sawmill (SIC 2421/ NAICS 321113)
Facility ID: 5096
Section 26, Township 4S, Range 16E, Pushmataha County, Oklahoma

Dear Mr. Anderson:

Enclosed is the permit authorizing construction of the referenced facility. Please note that this permit is issued subject to the standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the submittal process should be referred to the Emissions Inventory Staff at (405) 702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact the permit writer at Junru.Wang@deq.ok.gov or (405) 702-4197.

Sincerely,

DRAFT/PROPOSED

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

Enclosures

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
9-10-21

ACFM	Actual Cubic Feet per Minute
AD	Applicability Determination
AFRC	Air-to-Fuel Ratio Controller
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
BBL	Barrel(s)
BHP	Brake Horsepower (bhp)
BTU	British thermal unit (Btu)
C&E	Compliance and Enforcement
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS	Chemical Abstract Service
CAAA	Clean Air Act Amendments
CC	Catalytic Converter
CCR	Continuous Catalyst Regeneration
CD	Consent Decree
CEM	Continuous Emission Monitor
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CI	Compression Ignition
CNG	Compressed Natural Gas
CO	Carbon Monoxide or Consent Order
COA	Capable of Accommodating
COM	Continuous Opacity Monitor
D	Day
DEF	Diesel Exhaust Fluid
DG	Demand Growth
DSCF	Dry Standard (At Standard Conditions) Cubic Foot (Feet)
EGU	Electric Generating Unit
EI	Emissions Inventory
EPA	Environmental Protection Agency
ESP	Electrostatic Precipitator
EUG	Emissions Unit Group
EUSGU	Electric Utility Steam Generating Unit
FCE	Full Compliance Evaluation
FCCU	Fluid Catalytic Cracking Unit
FESOP	Federally Enforceable State Operating Permit
FIP	Federal Implementation Plan
FR	Federal Register
GACT	Generally Achievable Control Technology
GAL	Gallon (gal)
GDF	Gasoline Dispensing Facility
GEP	Good Engineering Practice
GHG	Greenhouse Gases
GR	Grain(s) (gr)
H_2CO	Formaldehyde
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HC	Hydrocarbon
HCFC	Hydrochlorofluorocarbon
HFR	Horizontal Fixed Roof
HON	Hazardous Organic NESHAP
HP	Horsepower (hp)
HR	Hour (hr)
I&M	Inspection and Maintenance
IBR	Incorporation by Reference
ICE	Internal Combustion Engine
LAER	Lowest Achievable Emission Rate
LB	Pound(s) [Mass] (lb, lbs, lbm)
LB/HR	Pound(s) per Hour (lb/hr)
LDAR	Leak Detection and Repair
LNG	Liquefied Natural Gas
LT	Long Ton(s) (metric)
M	Thousand (Roman Numeral)
MAAC	Maximum Acceptable Ambient Concentration
MACT	Maximum Achievable Control Technology
MM	Prefix used for Million (Thousand-Thousand)
MMBTU	Million British Thermal Units (MMBtu)
MMBTUH	Million British Thermal Units per Hour (MMBtu/hr)
MMSCF	Million Standard Cubic Feet (MMscf)
MMSCFD	Million Standard Cubic Feet per Day
MSDS	Material Safety Data Sheet
MWC	Municipal Waste Combustor
MWe	Megawatt Electrical
NA	Nonattainment
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH_3	Ammonia
NMHC	Non-methane Hydrocarbon
NGL	Natural Gas Liquids
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOI	Notice of Intent
NSCR	Non-Selective Catalytic Reduction

NSPS	New Source Performance Standards
NSR	New Source Review
O_3	Ozone
O&G	Oil and Gas
O&M	Operation and Maintenance
O&NG	Oil and Natural Gas
OAC	Oklahoma Administrative Code
OC	Oxidation Catalyst
PAH	Polycyclic Aromatic Hydrocarbons
PAE	Projected Actual Emissions
PAL	Plant-wide Applicability Limit
Pb	Lead
PBR	Permit by Rule
PCB	Polychlorinated Biphenyls
PCE	Partial Compliance Evaluation
PEA	Portable Emissions Analyzer
PFAS	Per- and Polyfluoroalkyl Substance
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers
PM_{10}	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers
POM	Particulate Organic Matter or Polycyclic Organic Matter
ppb	Parts per Billion
ppm	Parts per Million
ppmv	Parts per Million Volume
ppmvd	Parts per Million Dry Volume
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
psia	Pounds per Square Inch Absolute
psig	Pounds per Square Inch Gage
RACT	Reasonably Available Control Technology
RATA	Relative Accuracy Test Audit
RAP	Regulated Air Pollutant or Reclaimed Asphalt Pavement
RFG	Refinery Fuel Gas
RICE	Reciprocating Internal Combustion Engine
RO	Responsible Official
ROAT	Regional Office at Tulsa
RVP	Reid Vapor Pressure
SCC	Source Classification Code
SCF	Standard Cubic Foot
SCFD	Standard Cubic Feet per Day
SCFM	Standard Cubic Feet per Minute
SCR	Selective Catalytic Reduction
SER	Significant Emission Rate
SI	Spark Ignition
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SNCR	Selective Non-Catalytic Reduction
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
SOP	Standard Operating Procedure
SRU	Sulfur Recovery Unit
T	Tons
TAC	Toxic Air Contaminant
TEG	Triethylene Glycol
THC	Total Hydrocarbons
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulates
TV	Title V of the Federal Clean Air Act
$\mu g/m^3$	Micrograms per Cubic Meter
US EPA	U. S. Environmental Protection Agency
VFR	Vertical Fixed Roof
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRT	Vapor Recovery Tower
VRU	Vapor Recovery Unit
YR	Year
2SLB	2-Stroke Lean Burn
4SLB	4-Stroke Lean Burn
4SRB	4-Stroke Rich Burn