DRAFT

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **November 16, 2022**

TO: Lee Warden, P.E., Permits and Engineering Group Manager

THROUGH: Richard Kienlen, P.E., Engineering Manager, New Source Permits Section

THROUGH: Ryan Buntyn, P.E., New Source Permits Section

FROM: Anthony Maxwell, Regional Office at Tulsa

SUBJECT: Evaluation of Permit No. **2003-007-O (M-2)**
Mill Creek Lumber DBA Wood Systems, Inc.
Wood Systems Tulsa Facility (SIC 2431) (Facility ID 5692)
Latitude 36.09642º N, and Longitude 96.04713º W
SW/4 Section 28, Township 19N, Range 12E, Tulsa County
4615 S. 49th W. Ave., Tulsa, Oklahoma

SECTION I. INTRODUCTION

Mill Creek Lumber DBA Wood Systems, Inc. (applicant) currently operates their Wood Systems Tulsa Facility (facility) under Permit No. 2003-007-O (M-1), issued November 3, 2010. The applicant submitted a self-disclosure on April 17, 2020, and subsequently requested an increase of their PM emission limit due to increased sawdust disposal. The applicant installed a newer, third dust collector ("Dantherm") which has equivalent or better control efficiency than the two older dust collection units which remain in service. The previous permit correlated emissions of particulate matter (PM) generated from woodworking to amount of sawdust disposed based on control efficiency of the two older dust collectors. The Dantherm unit relieves some of the load from the two older dust collection units. Also, the applicant has replaced their old spray guns with newer spray guns designed for higher transfer efficiency. The memo is updated for materials usage and throughput. The PM limit is updated in the permit for woodworking. All other limits are retained. The facility is considered to be a "synthetic" minor source. On issuance, this permit will be a Federally Enforceable State Operating Permit (FESOP).

SECTION II. PROCESS DESCRIPTION

The facility manufactures "Architectural Millwork" specializing in the design and manufacture of doors, molding, cabinetry, walls, case-goods and stairs for restaurants, banks, offices, schools, healthcare facilities and residences (SIC 2431). The facility consists of one large rectangular building approximately 300 ft wide by approximately 400 ft long or approximately 120,000 ft^2 of floor space. The facility normally operates 8 hours/day, 5 days/week, and 51 weeks/year, for a total of 2,040 hours/year.

The manufacturing operation starts with unfinished random-sized wood raw materials. The major manufacturing processes include sawing/shaping/sanding, gluing, and coating. The facility has dust collectors and ductwork to control dust from sawing/shaping/sanding equipment.

The manufacturing process is divided into 4 areas.

1. **Moldings and Trim**

Hardwood lumber is brought in, ripped to width, and then run through a molder to cut the desired profile. It is then moved to shipping or to the benches for assimilation (incorporation) into fixtures.

2. **Case Goods/Custom Fixtures**

Panels that many times have been laminated or finished before they arrive, are cut and machined into cabinet parts with Computer Numerically Controlled (CNC) equipment, then sent to benches for final assembly. After completion, fixtures are moved to shipping.

3. **Laminate Area**

Laminate adhesive is pushed by a Binks Pogo pump and sprayed onto a substrate, such as particle board, and then sprayed on a cut-to-size sheet of laminate. Once both surfaces have been covered, the two are joined together and a pressure roller is used to push out any air and ensure positive contact. After completion, items are moved either to shipping or to the benches for final assembly.

4. **Finish Area**

Any product that needs to be further finished is final-sanded, and taped off to protect any surface that should not receive a finish. These prepped items are then moved to the spray booth to receive the appropriate finish. After drying, these items are moved to another area for shipment or to benches for final assembly.

The various finishing coatings are applied manually with handheld spray guns. The facility uses air-assisted airless spray guns (HVLP) with a transfer efficiency capable of achieving up to 86%. Spray coating is performed in two paint booths. Dimensions of the booths are 16 feet x 18 feet and 20 feet x 24 feet. Each booth is equipped with an exhaust fan and a SmartMedia Blanket, 31 series, 3SM3184-45 filter. The filters have an efficiency of 99.59%. Each booth is an open bay with three walls and is equipped with an exhaust fan across its back wall. The exhaust fan constantly draws booth air through the filter to atmosphere. Booth filters are changed when the manometer connected to each booth reaches 0.75 inches over baseline.

SECTION III. EMISSIONS

The only significant VOC emissions are from the coating operations. The facility might use 3 or 4 coating products per day. On average, 10 gallons of product is sprayed per day. Production may fluctuate to cause up to 55 gallons to be sprayed in a day. A unilateral increase of all coatings and resultant emissions is considered here to represent an increase in facility production.

Table 1. VOCs (paints, thinners, sealers, etc.)

Product	Daily Usage (gallons)	VOC Content (lb/gal)	VOC (lb/day)	VOC (TPY)	HAP (TPY)
Sherwin Williams Sherwood WW Varnish Sanding Sealer V81FH4	12	4.69	56.28	7.18	0.4
Sherwin Williams Sherwood Matte WW Conversion Varnish V84FH161 (NC Lacquer)	12	5.09	61.08	7.79	0.11
Sherwin Williams Sherwood WW CV 35-40 Sheen V84FL22	12	4.6	55.2	7.04	0.8
Axalta Ultraguard CV AUF5802	12	4.56	54.72	6.98	0.22
Axalta Luster Lac NAW1300 White Primer	15	5.08	76.2	9.72	0.36
Axalta Ultraguard White CV AUW7104	10	3.9	39	4.97	0.25
Totals	**73**	**---**	**342.48**	**43.67**	**2.14**

The same unilateral increase in production applied to the glues yields these emissions.

Table 2. VOCs (glues, adhesives, etc.)

Product	Annual Usage (lb/yr)	VOC content (% wt)	VOC (lb/yr)	VOC (TPY)
Roo Glue Clear Melamine Adhesive	900	1.483	13.35	0.007
Colorflex 1001 and all colors	464	3	13.92	0.007
Titebond II Premium Wood Glue	2,025	13.7	277.4	0.139
Titebond Original Wood Glue	1,890	10.7	202.2	0.101
Jet-melt Adhesive 3747/-AE	300	50	150.0	0.075
Waxilit 22-74	330.75	80	264.6	0.132
Dorus KS 208/2 N	1,800	30	540.0	0.27
Ronda-Cool Grinder Coolant 700050	144	35	50.4	0.025
3M 94CA Spray Adhesive	3,758.5	8.48	318.72	0.159
Color Rite Premium Acrylic Caulk	154.7	3	4.64	0.002
Totals			**1,835.23**	**0.917**

Particulate Matter (PM) From Sawing/ Shaping/ Sanding

PM emissions due to sawdust generated by woodworking equipment operations are controlled by the facility's dust collection system. The dust collection system is designed to collect particulates at the equipment point of origin and draw the collected particulates to the collection/storage points until it is hauled away. Each dust collector handles certain equipment located throughout areas within the plant where sawing/shaping/sanding occurs.

Each of the two older dust collectors consist of a cyclone that exhausts to a baghouse. Each of the two older dust collectors has a 94% rated collection efficiency. Each of the two older dust collectors is equipped with "after-filter bags" made of singed polyester felt. The after-filter bags have a filter efficiency of 73.5% for particle sizes of 2.5 microns ($PM_{2.5}$) or less based on manufacturer data. The larger of these two older units is rated at 22,000 CFM and is equipped with 24 after-filter bags, and the smaller unit is rated at 11,000 CFM and is equipped with 12 after-filter bags. The sawdust and debris generated by woodworking equipment and operations are ducted to a cyclone. Particulates precipitate to the bottom and exit the cyclone through an airlock into a dust bin. DUST COLLECTOR#1 and DUST COLLECTOR#2 exhaust into 55-gallon drums (the sawdust house). The wood particulate waste is hauled away from the site.

The newest, third dust collector is a Dantherm NFK 3HJ-1BL (DUST COLLECTOR#3) which is rated at 15,000 CFM and equipped with "Superbags" made of 100% polyester having 95.5 % rated filtration efficiency. Particulates ducted from points of origin to the baghouse are extracted from the baghouse through an airlock and collected into a single, large roll-on, roll-off dumpster which is hauled away from the site.

Table 3. Estimated Yearly Raw Wood Processed

Basis: raw wood material used per busiest year - Company provided

Wood Combinations	**Type of Pure Wood**	**Raw Stock Wood Processed per Busiest Year [tons]**	
	Poplar	249.0	
	Red Oak	50.8	
	Maple	9.24	
	Walnut	2.31	
	Cherry	2.31	
	Mahogany	4.62	
	Birch	4.62	
	All other species	9.24	
	Sub-total	***332***	
Particle Board		260.0	
Medium density fiberboard		260.0	
Plastic laminate		800.0	
Fir plywood		210.0	
Melamine		210.0	
	Sub-total	***1,740***	
Total Raw Wood Material Processed		**2,072**	

An equation was derived in previous Permit No. 2002-007-O (M-1) and is carried forward for estimating the total amount of $PM_{2.5}$ emitted into the atmosphere. The equation was based on analysis of just the two older dust collection units (DUST COLLECTOR#1, DUST COLLECTOR#2), prior to the installation of the third, newest dust collector. The fractional efficiency (FE) of the singed polyester felt after-filter bags (as equipped on the two older dust collection units) are cumulatively rated by the manufacturer for the various PM sizes (i.e., collected

dust that is hauled away). The amount released into the atmosphere is the differential (1-FE). Accordingly, Appendix B.1-48 (10/86) of AP-42 approximates 20% of all PM created through sanding, shaping, and sawing as regulated PM and still only a portion of that (29.5%) is estimated to be regulated $PM_{2.5}$. Simplified as a function of the amount of sawdust hauled away each year, the total amount of regulated $PM_{2.5}$ released into the atmosphere is shown below.

Total $PM_{2.5}$ Emissions in TPY = 0.0264 x (amount of sawdust hauled away in TPY)

For example, if 151 tons of wood waste is hauled away in a year, then controlled PM emissions are estimated to be 3.99 TPY by using the above equation.

Note the above equation for estimating the total amount of $PM_{2.5}$ emitted into the atmosphere was based on the two older dust collection units (DUST COLLECTOR#1, DUST COLLECTOR#2) which are less efficient than the newest, third dust collection unit. Therefore, the above equation remains conservative for estimating the PM emissions due to sawing, sanding, and shaping.

Hazardous Air Pollutants (HAP)

HAPs present in the coatings used at this facility remain below the 10/25 TPY limit at this facility.

SECTION IV. 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) [Not 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, Emission 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. Emission inventories were submitted and fees paid for previous years as required.

OAC 252:100-7 (Permits for Minor Facilities) [Applicable]
Subchapter 7 sets forth the permit application fees and the basic substantive requirements of permits for minor facilities. Since criteria pollutant emissions are less than 100 TPY for each pollutant, and emissions of Hazardous Air Pollutants (HAP) will not exceed 10 TPY for any individual HAP or 25 TPY for any aggregate of HAP, the facility is defined as a minor source. As such, BACT is not required. Control technology is already present in the form of filters for the

paint booths and cyclones for the PM. Permit conditions requiring maintenance of the paint booth filters and PM cyclones are appropriate to ensure the source remains minor.

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 (PM)) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment. Space heaters for employee comfort are the only fuel-burning equipment on-site. AP-42 (7/98) Table 1.4-2 lists natural gas total PM emissions to be 7.6 lbs/million scf or about 0.0076 lbs/MMBTU, which is in compliance.
Section 19-12 limits particulate emissions from new and existing emission points in an industrial process based on process weight rate, as specified in Appendix G.

Emission Points	Process Rate (tons/hr)	App. G PM Limit (lb/hr)
Saws, Shapers, Sanders	1.016	4.143

As shown in the above table, Appendix G suggests an hourly PM limit based on the facility operating 8 hours per day, 5 days per week, 51 weeks per year (2,040 hours per year) and an annual limit of 4.22 TPY PM. The permit ensures compliance with the Appendix G limit.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences that 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. Based on experience with other operations of this type, the potential for violating the standards is negligible.

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 originated 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. Cyclones and fabric filters are required to be used on sawdust collection equipment to minimize the emission of dust and particulates.

OAC 252:100-31 (Sulfur Compounds) [Not Applicable]
Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. AP-42, Table 1.4-2 (3/98), lists natural gas SO_2 emissions to be 0.6 lbs/MMft^3 or about 0.0006 lbs/MMBTU, which is in compliance. The facility does not have fuel-burning equipment. Space heaters for comfort heating are not affected by this subchapter.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.20 lbs of NOx per MMBTU, three-hour average. There is no fuel-burning equipment at this facility except for heating, and none of these equipment items exceed the 50-MMBTUH threshold.

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) [Part 5 Applicable]
Part 5 limits the VOC content of alkyd primer, epoxy and maintenance finish coatings to 4.8 lbs/gallon, vinyl and acrylic coatings to 6.0 lbs/gallon, lacquers to 6.4 lbs/gallon, and custom product finishes to 6.5 lbs/gallon less water. The permit requires all coatings to comply with the solvent limitations including solvents used to clean-up any article, machine or equipment used in applying coatings. The facility uses final "as applied" paint mixtures with VOC content less than the VOC lbs/gal thresholds specified in this part.
Part 5 requires all emissions of VOC from the clean-up of any article, machine or equipment used in applying coatings to be included when determining compliance with the above stated solvent limitations and emission limits. All solvent usage not incorporated into coatings as they are applied has been averaged over coating usage and all coatings still comply with the VOC limitations.

OAC 252:100-39 (VOC in Nonattainment and Former 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.
Section 39-46 applies only to industries in Tulsa which coat metal parts and products, such as large farm machinery, small farm machinery, small appliances, commercial machinery, industrial machinery, and fabricated metal products, but does not include architectural coating, aerospace coating, or automobile refinishing.
Section 39-47 applies only to existing or new aerospace vehicle and component coating operations at aerospace manufacturing, rework, or repair facilities located in Tulsa County that have the potential to emit 10 TPY or more or actual emissions of 100 pounds or more per 24-hour day, on a monthly average, of VOC from coating operations. For purposes of this Section, coating operations include associated cleaning operations as specified in OAC 252:100-39-47(d)(4) and surface preparation. Coating operations subject to this Section are exempt from the requirements of OAC 252:100-37-25 and 252:100-37-27.

The facility is located inside Tulsa County. The coating of wood products is not included in the industries listed in this subchapter.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates toxic air contaminants (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.

SECTION V. FEDERAL REGULATIONS

NSPS, 40 CFR 60 [Not Applicable]
The following NSPS subparts affect surface coating operations. However, none of these subparts affects the coating of wooden fixtures.

Subpart EE:	metal furniture
Subpart MM:	automobiles and light-duty trucks
Subpart QQ:	graphic arts (rotogravure)
Subpart RR:	pressure-sensitive tape and labels
Subpart SS:	large appliances
Subpart TT:	metal coils
Subpart WW:	beverage cans
Subpart FFF:	flexible vinyl and urethane

There are others, but there are no subparts that affect the coating of wooden fixtures.

NESHAP, 40 CFR Part 61 [Not Applicable]
There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides, or vinyl chloride.

NESHAP, 40 CFR Part 63 [Not Applicable]
Subpart JJ concerns a facility engaged in the manufacture of wood furniture or its components and which is a major source. This facility is not a major source.
Subpart HHHHHH concerns facilities engaged in paint stripping and miscellaneous surface coating operations. This facility does not use coatings containing any of the "target HAPs" listed, and is not an affected facility under this subpart.

SECTION VI. COMPLIANCE

Fee Paid
Synthetic minor source modified operating permit fee of $750.

Inspection
A partial compliance evaluation was performed by Anthony Maxwell, Permit Engineer of ROAT Air Quality Division on June 3, 2021, accompanied by Peter Speck, Plant Manager of Wood Systems Tulsa Facility, and Jim Wright, Finish Shop Supervisor of Wood Systems Tulsa Facility. No violations were noted.

SECTION VII. TIER CLASSIFICATION AND PUBLIC REVIEW

Tier Classification
This application has been classified as **Tier I** per OAC 252:4-7-32 based on the fact that it is a request for a modified operating permit for a minor source. 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*.

The applicant 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 owns the land used to accomplish the permitted purpose.

The draft permit will undergo public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA will have 30 days to comment on the draft permit. Tribal nations will be notified of the draft permit. Permits available for public review and comment are found at: https://www.deq.ok.gov/permits-for-public-review/

SECTION VIII. SUMMARY

This facility was constructed as described in the application. There are no active Air Quality compliance or enforcement issues concerning this facility that would affect the issuance of this permit. Issuance of the operating permit is recommended, contingent upon public review.

PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Mill Creek Lumber DBA Wood Systems, Inc. **Permit No. 2003-007-O (M-2)**
Wood Systems Tulsa Facility **Facility ID 5692**

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on April 17, 2020, and supplemental information. The Evaluation Memorandum dated November 16, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Emission limitations

Facility-wide emission limit [12-month rolling total] of 50 TPY VOC, 9.9 TPY for each single HAP, and 24.9 TPY for total combined HAP for glues, adhesives, paints, thinners, sealers, etc.

4.22 TPY $PM_{2.5}$ [12-month rolling total] emissions from woodworking operations. PM emissions shall be calculated based on the amount of sawdust hauled away using the following equation:

$$\text{Total } PM_{2.5} \text{ TPY} = 0.0264 \times (\text{amount of sawdust hauled away in tons per year})$$

2. Facility shall calculate VOC/HAP emissions based on usage and material content as listed in MSD sheets, monthly and 12-month rolling total, assuming all volatile materials consumed are emitted.

3. The facility shall operate a dust collection system for the sawing/sanding/shaping operations. The dust collection system shall collect sawdust waste generated at source points by ductwork connected to stationary wood working equipment. Dust collection units shall exhaust air through filters prior to release to atmosphere. Filters shall have not less than 73.5% particulate removal efficiency based on manufacturer's data. Airlocks shall transfer collected sawdust waste from dust collection units to disposal containers. The dust collection system shall be properly functioning and maintained in good working order per manufacturer recommendations. A copy of manufacturer recommendations for proper maintenance of equipment shall be kept at the facility for inspection.

4. All liquid wastes and/or hazardous wastes from the facility, including cleaning solvents, paints, and paint thinners, shall be handled in accordance with applicable requirements of state and federal rules and regulations.

5. The permittee shall keep records of operations as listed. These records shall be maintained on-site for a period of at least five years following the date of recording and made available to regulatory personnel upon request.

a. Total quantity of each material containing VOC and/or HAP, monthly totals. Permittee may, at their discretion, track this information using detailed point-of-use records, or facility-wide tracking of material purchases and inventory. Materials disposed of as liquid waste may be discounted from the totals of material consumed, provided adequate documentation of such disposals is maintained.
b. Facility shall maintain records of waste sawdust hauled, 12-month rolling total.
c. Facility shall calculate and record VOC and HAP [individual and total] emissions based on material usage and content as listed in MSD sheets (monthly and 12-month rolling total).
d. Facility shall calculate and record $PM_{2.5}$ emissions based on a 12-month rolling total of weight of waste sawdust hauled.
e. MSDS/SDS/safety data sheets that provide sufficient information to calculate emissions and demonstrate compliance for Specific Condition #1 for all VOC and HAP-containing materials.
f. Records showing proper maintenance of control equipment (at least per manufacturer's recommendations), and pressure drop readings at least once daily when operating.

6. Paint booths shall be equipped with particulate filters and manometers and shall be operated and maintained as per manufacturer's recommendations. Filters shall be replaced as recommended by the manufacturer. A copy of the manufacturer's recommendations for proper maintenance of equipment shall be kept at the facility for inspection.

7. This permit shall supersede Permit No. 2003-007-O (M-1) and all previous Air Quality operating permits issued to this facility, which are now cancelled.

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

FESOP No. 2003-007-O (M-2)

Mill Creek Lumber DBA Wood Systems, Inc.,

having complied with the requirements of the law, is hereby granted permission to operate all the sources within the boundaries of their fence at Wood Systems Tulsa Facility located in Section 28, Township 19N, Range 12E, Tulsa County, Oklahoma,

subject to Standard Conditions dated February 13, 2020, and Specific Conditions, both attached.

DRAFT

Lee Warden, P.E. **Date**

Permits & Engineering Group Manager

Peter Speck, Plant Manager
Mill Creek Lumber DBA Wood Systems, Inc.
4615 S. 49th W. Ave.
Tulsa, OK 74107

Subject: Permit No. **2003-007-O (M-2)**
Facility Name: Wood Systems Tulsa Facility (Facility ID 5692)
Location: Section 28, Township 19N, Range 12E, Tulsa County

Dear Mr. Speck:

Enclosed is the permit authorizing operation of the referenced facility. Please note that this permit is issued subject to standard and specific conditions that 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 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. The reporting schedule thereafter is explained in OAC 252:100-5-2.1.(a)(2). Any questions concerning the reporting schedule or 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 our office at (918) 293-1600.

Sincerely,

AMaxwell

Anthony Maxwell
Regional Office at Tulsa
AIR QUALITY DIVISION

Enclosure

Cherokee Nation
Attn.: Chuck Hoskin, Jr., Principal Chief
P.O. Box 948
Tahlequah, OK 74465

Re: Permit No. **2003-007-O (M-2)**
Facility Name: Wood Systems Tulsa Facility (Facility ID 5692)
Location: Section 28, Township 19N, Range 12E, Tulsa County

Dear Mr. Hoskin:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier I application referenced above. A Tier I application requires AQD to provide a 30-day public comment period on the draft Tier I permit on the ODEQ website. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to email notifications provided to tribal contacts on record.

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

https://www.deq.ok.gov/permits-for-public-review/

If you prefer a copy of the draft permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify our Chief Engineer, Phillip Fielder, 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
P.O. Box 1677
Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can be contacted at (405) 702-4237, and Mr. Fielder may be reached at (405) 702-4185.

Sincerely,

Lee Warden

Lee Warden, P.E.
Permits and Engineering Group Manager
AIR QUALITY DIVISION

Scott A. Thompson
Executive Director

OKLAHOMA Environmental Quality

Kevin Stitt
Governor

Muscogee Creek Nation
Attn: Gary Batton, Chief
PO Box 1210
Durant, OK 74702-1210

Re: Permit No. **2003-007-O (M-2)**
Facility Name: Wood Systems Tulsa Facility (Facility ID 5692)
Location: Section 28, Township 19N, Range 12E, Tulsa County

Dear Mr. Batton:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier I application referenced above. A Tier I application requires AQD to provide a 30-day public comment period on the draft Tier I permit on the ODEQ website. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to email notifications provided to tribal contacts on record.

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

https://www.deq.ok.gov/permits-for-public-review/

If you prefer a copy of the draft permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify our Chief Engineer, Phillip Fielder, 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
P.O. Box 1677
Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can be contacted at (405) 702-4237, and Mr. Fielder may be reached at (405) 702-4185.

Sincerely,

Lee Warden

Lee Warden, P.E.
Permits and Engineering Group Manager
AIR QUALITY DIVISION

MINOR SOURCE PERMIT TO OPERATE / CONSTRUCT
AIR POLLUTION CONTROL FACILITY
STANDARD CONDITIONS
(February 13, 2020)

A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.

B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) 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 252:100-7-15(f)]

C. 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 252:100-7-18(a)]

D. Unless specified otherwise, the term of an operating permit shall be unlimited.

E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required. [OAC 252:100-7-2(f)]

F. The following limitations apply to the facility unless covered in the Specific Conditions:

1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. *www.deq.ok.gov* [OAC 252:100-5]
3. 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 252:100-9]
4. 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]
5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
6. 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. [OAC 252:100-25]
7. 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]

8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
9. 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 an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
10. 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]

G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]

1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.

H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]

I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (f)]

J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]

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
FEL	Federally Enforceable Limit(s)
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