**INFORMATION RELATIVE TO**

**THE TITLE V OPERATING PERMIT**

**March 18, 2020**

FOR:

**Vicksburg Forest Products, LLC – Waltersville Lumber Mill**

**1725 North Washington Street**

**Vicksburg, Warren County, MS 39183**

FACILITY DESCRIPTION

Vicksburg Forest Products, LLC – Waltersville Lumber Mill (i.e. “VFP”) is an existing industrial facility that manufactures dimensional lumber primarily from harvested softwood timber (lumber from harvested hardwood timber is only made occasionally). The process involves debarking timber and then creating dimensional timber from logs in the sawmill area. The lumber is stacked and transferred to steam-heated, indirect-fired drying kilns [twenty-eight (28) in total). The dried rough lumber is then shaped to the requisite thickness, width, and length within the planer mill area. Thereafter, the lumber may undergo additional processes before considered a finalized product (a chemical treatment process in order to apply a fungicide, insecticide, and/or iron stain inhibitor; a coating process in order to apply logos, stamp grades, or seal edges).

The overall emissions generated within the planer mill area are routed to the facility’s wood waste handling system, which consists of a baghouse and a cyclone). The dried wood shavings generated within the planer mill are routed to a fuel bin for the wood waste-fired boiler via the cyclone.

TITLE V SOURCE APPLICABILITY

The facility’s potential-to-emit exceeds the Title V major source threshold of 100 tons per year (tpy) for each of the following criteria air pollutants: particulate matter (PM), particulate matter less than 10 µm (PM10), particulate matter less than 2.5 µm (PM2.5), nitrogen oxides (NOX), carbon monoxide (CO), and volatile organic compounds (VOCs).

The facility’s potential-to-emit hazardous air pollutants (HAPs) does not exceed either Title V major source threshold of 25 tpy for all HAPs in total or 10 tpy for any individual HAP. The facility established restrictions in a Permit to Construct Air Emissions Equipment issued on October 3, 2018 to maintain emissions at or below 9.9 tpy for individual HAP and 24.9 tpy for all HAPs in total.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) APPLICABILITY

Given that the facility is not one of the twenty-eight (28) categorical stationary sources listed in 40 CFR 52.21(b)(1)(i)(c)(iii); the applicable threshold is 250 tpy. As such, VFP is a PSD major source for volatile organic compounds (VOCs).

FACILITY MODIFICATIONS AND/OR PERMIT CHANGES

The purpose of this permitting action is to renew VFP’s Title V Operating Permit (TVOP) (initially issued on March 25, 2016; modified on May 24, 2018). Within this renewal action, the following modifications requested by the facility will be incorporated into the permit:

* *Reduction in monitoring (opacity)* – The frequency for conducting visible emission observations on the wood waste-fired boiler (Emission Point AA-002) has been reduced from daily to weekly. The justification for this reduction was based on the realization that historical opacity readings never exceeded fifteen percent (15%), and the noted boiler can only combust uncontaminated wood waste (as a result of the Permit to Construct issued on October 3, 2018).
* *Reduction in monitoring (stack testing)* – Based on historical stack testing data over the past ten (10) years, the frequency for which VFP must conduct performance stack testing to evaluate pollutant-specific emissions from Emission Point AA-002 will be modified as following:
* As the historical margin of compliance has (on average) been equal to or greater than ninety-five percent (95%) for the volatile organic compound (VOC) and sulfur dioxide (SO2) pollutants, VFP will no longer be required to conduct performance stack testing in order to demonstrate compliance with the applicable emission limitations. The noted reduction is also being allowed given that the fuel source (i.e. uncontaminated wood waste) for Emission Point AA-002 was specifically defined in the Permit to Construct Air Emissions Equipment issued on October 3, 2018.
* As the historical margin of compliance has (on average) been equal to or greater than fifty percent (50%) for the particulate matter (PM) and nitrogen oxides (NOX) pollutants, VFP is now required to demonstrate compliance with the applicable emission limitations via performance stack testing once every five (5) years not to exceed sixty-one (61) after the previously completed test.
* As it pertains to the frequency for which VFP must demonstrate compliance with the carbon monoxide (CO) emission limitation, an alternative frequency scenario is being incorporated:
* If the results from the previous performance test indicate that CO emissions are greater than fifty percent (50%) of the emission limitation (based on a 3-hour average), VFP must conduct performance stack testing thereafter biennially and no later than 25 months after the previously completed test.
* If the results from the previous performance test indicate that CO emissions are equal to or less than fifty percent (50%) of the emission limitation (based on a 3-hour average), VFP shall conduct testing thereafter once every five (5) years and no later than 61 months after the previously completed test.
* *Omission of calculating emissions to demonstrate compliance with “tons per year” limitations (wood waste-fired boiler)* – It was determined that the annual PM, NOX, VOC, CO, and SO2 emission limitations for the wood waste-fired boiler were derived as a result of extrapolating the respective hourly emission limitations over 8,760 hours of operation (the maximum annual period). As such, the MDEQ concluded that requiring VFP to calculate / record the respective pollutant emissions (in tons per year) both monthly and on a rolling 12-month period was unnecessary as long as VFP demonstrates compliance with the hourly emission limits (as applicable).
* *Inclusion of more stringent sulfur content restriction in fuel oil* – To ensure that any potential fuel oil-fired boiler operated under the provisions of Emission Point AA-004 meets the temporary boiler definition promulgated by 40 CFR Part 60, Subpart Dc, VFP requested that the existing sulfur content threshold for No. 2 fuel oil be lowered from 0.5% by weight (or 5,000 parts per million) to five hundred (500) parts per million (ppm).
* *Removal of stack testing requirements (temporary boilers)* – VFP determined that by utilizing the applicable AP-42 emission factors for a fuel oil-fired external combustion source (Chapter 1.3) and a natural gas-fired external combustion source (Chapter 1.4) result in potential hourly emissions (in pounds per hour) that are either identical or more stringent to the existing emission limitations for a temporary boiler.

As such, VFP will demonstrate compliance with the annual emission limitations established for a temporary boiler by using the applicable AP-42 factors, and the existing compliance demonstration requirement [i.e. stack testing after forty-five (45) days of operation] will be removed.

Additionally, the following permitting action will be incorporated into this renewed TVOP:

* P*ermit to Construct Air Emissions Equipment (issued on October 3, 2018)* – VFP was authorized to change the method of operation for the existing twenty-eight (28) lumber drying kilns, which involved drying green softwood lumber (as opposed to only green hardwood lumber). After certifying completion of this operational change on October, 8, 2018, VFP became a PSD major source for VOCs. In addition to authorizing the operational change, the noted Permit to Construct authorized the following standards:
* A limitation on both the annual (based on a rolling 12-month total) facility-wide emission of any individual hazardous air pollutant (HAP) to no more than 9.9 tons per year (tpy) and all HAPs in total to no more than 24.9 tpy;
* A limitation on the annual (based on a rolling 12-month total) throughput of softwood lumber dried within the collective kilns to no more than 115.0 million board feet;
* A limitation on the minimum moisture content of any softwood lumber dried within the kilns to no less than twelve percent (12%).
* A restriction on the fuel source for the wood waste-fired boiler (i.e. uncontaminated wood waste).

COMPLIANCE ASSURANCE MONITORING (CAM) APPLICABILITY

40 CFR Part 64 specifies the requirements for CAM. The general applicability of this rule can be found in 40 CFR 64.2 and requires a Title V source to comply with the CAM requirements if all three of the following criteria are met for a pollutant-specific emission unit (PSEU):

(1) The unit is subject to an emission limitation or standard for a regulated air pollutant other than exemptions under 40 CFR 64.2(b)(1);

(2) The unit uses a control device to comply with the standard; and

(3) The unit has pre-control emissions exceeding Title V major source threshold.

Emissions generated from the planer mill area (Emission Point AA-012) are routed to the wood waste handling system (which consists of a baghouse and a cyclone). However, the planer mill area is not subject to any applicable pollutant emission limitation or standard. Moreover, particulate matter collected within both the baghouse and the cyclone are used as the fuel source for wood waste-fired boiler, which implies the inherency of the equipment for the operation of the boiler. As a result, CAM does not apply to the planer mill area.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) APPLICABILITY

**40 CFR Part 63, Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products**

VFP operates twenty-eight (28) indirect-fired, steam-heated lumber drying kilns (Emission Points AK-001 through AK-028) to produce kiln-dried softwood and hardwood lumber. While kiln-dried lumber is considered a “*composite wood product*” by the subpart, the facility must also be a major source of HAP emissions. As limitations on the emission of HAPs were established in the aforementioned Permit to Construct, VFP is an “*area source*” of HAPs. As such, the facility is **not** subject to requirements found in Subpart DDDD.

**40 CFR Part 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources**

VFP operates one (1) wood waste-fired boiler (Emission Point AA-002). Therefore, the facility is subject to applicable requirements found within Subpart JJJJJJ. However, since Emission Point AA-002 was installed before the applicable date of June 4, 2010, this boiler is considered “*existing source*” and is only subject to applicable work practice standards (i.e. routine performance tune-ups).

VFP also has authorization to operate up to two (2) temporary boilers (Emission Point AA-004) during periods of shutdown for the primary wood waste-fired boiler (Emission Point AA-002). However, as defined by the subpart, a temporary boiler is not subject to applicable requirements found in Subpart JJJJJJ as long as the boiler complies with an on-site time restriction (no more than 12 consecutive months). The draft permit contains a condition that the boiler(s) must meet the definition of temporary boiler as defined by NSPS Subpart Dc, which will ensure the boiler(s) meets the definition of a “*temporary boiler*” under this NESHAP.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) APPLICABILITY

**40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

VFP operates one (1) wood waste-fired boiler (Emission Point AA-002) that has a maximum heat input capacity equal to / greater than 10 MMBTU per hour but less than 100 MMBTU per hour. However, the boiler was installed before the applicable date of June 9, 1989 (i.e. construction commenced in November 1988). As such, VFP is **not** subject to with applicable requirements found in Subpart Dc.

VFP has the authorization to operate up to two (2) temporary boilers (Emission Point AA-004) during periods of shutdown for the primary wood waste-fired boiler (Emission Point AA-002). Under Subpart Dc, a boiler must comply with a SO2 emission limitation (0.060 pounds per MMBTU) and an on-site time restriction (no more than 180 consecutive days) in order to be a “*temporary boiler*”. As a result, VFP proposed a restriction on the sulfur content contained within fuel oil (i.e. no more than 500 ppm) to ensure that the operation of any boiler brought on-site (natural gas-fired or fuel oil-fired) meets the outlined definition of a “*temporary boiler*”.

SPECIFIC APPLICABLE REQUIREMENTS

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| --- | --- | --- | --- | --- |
| **Emission** **Point(s)** | **Pollutant(s) /****Parameter(s)** | **Applicable Requirement(s)** | **Limitation(s) / Standard(s)** | **Monitoring Requirement(s)** |
| AA-100 | PM  | 11 Miss. Admin. Code Pt. 2, R.1.3.F.(1). | $$E=4.1 (p^{0.67})$$ | The facility will demonstrate compliance with this standard conducting visible emission observations and performance stack testing at applicable sources.  |
| Opacity | 11 Miss. Admin. Code Pt. 2, R. 1.3.A.11 Miss. Admin. Code Pt. 2, R. 1.3.B. | ≤ 40% | The facility shall demonstrate compliance with the opacity standard by performing and recording weekly visible emission observations from the emission sources that can significantly impact opacity (i.e. the wood waste-fired boiler and the baghouse). |
| HAPs | Federally Enforceable Permit to Construct Issued on October 3, 2018**(Major Source Avoidance Limit)** | 9.90 tpy (Individual)24.90 tpy (Total)(Rolling 52-Week Period) | The facility shall calculate and record HAP emissions from all applicable operations and/or process units both weekly and on a rolling 52-week period.  |
| AA-002AA-004 | SO2 | 11 Miss. Admin. Code Pt. 2, R. 1.4.A.(1). | 4.8 Pounds / MMBTU Heat Input | Given that the boilers that operate (or will operate) on-site are required to use low-sulfur fuels (i.e. uncontaminated wood waste, low-sulfur fuel oil, pipeline natural gas), the margin of compliance for this State standard should be significant. |
| AA-002 | PM | 11 Miss. Admin. Code Pt. 2, R. 1.3.D.(2). | 0.30 Grains / Dry Standard Cubic Foot | Given that the facility shall only combust uncontaminated wood waste within the boiler, the margin of compliance with this standard should be significant. |
| PM | Federally Enforceable Permit to Construct Issued on May 24, 1988 and Modified on September 17, 1999 | 45.6 Pounds / Hour199.7 tpy (Rolling 12-Month Total) | The facility shall conduct routine performance stack testing to demonstrate compliance with each hourly emission rate limitation (with the exception of VOCs and SO2). |
| NOX | 30.0 Pounds / Hour131.4 tpy (Rolling 12-Month Total) |
| CO | 23.2 Pounds / Hour101.6 tpy (Rolling 12-Month Total) |
| **Emission****Point(s)** | **Pollutant(s) /****Parameter(s)** | **Applicable Requirement(s)** | **Limitation(s) / Standard(s)** | **Monitoring Requirement(s)** |
| AA-002 | SO2 | Federally Enforceable Permit to Construct Issued on May 24, 1988 and Modified on September 17, 1999 | 2.3 Pounds / Hour10.1 tpy (Rolling 12-Month Total) | The facility shall conduct routine performance stack testing to demonstrate compliance with each hourly emission rate limitation (with the exception of VOCs and SO2). |
| VOCs | 8.0 Pounds / Hour36.0 tpy (Rolling 12-Month Total) |
| AA-004 | PM | 11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).11 Miss. Admin. Code Pt. 2, R. 1.10.B. | 0.6 pounds / MMBTU per hour,or$$E=0.8808(I^{-0.1667})$$ | Given that the facility can only combust natural gas or fuel oil within a temporary boiler, the margin of compliance with either applicable standard should be significant. |
| Operational / Emission Standards | Federally Enforceable Permit to Construct Issued on July 26, 1994; Modified by Title V Operating Permit Issued on April 13, 2005 and on Issuance Date Herein11 Miss. Admin. Code Pt. 2, R. 2.15.C. | Operate Temporary Boiler(s) in Accordance with Emission Standards and Applicable Operating Scenarios | The facility shall calculate emissions using applicable AP-42 emission factors, record the volume of fuel oil combusted daily (as applicable), and maintain the sulfur content of any fuel oil combusted (as applicable). |
| AK-001throughAK-028 | Dried Lumber Throughput | Federally Enforceable Permit to Construct Issued on October 3, 2018**(PSD Avoidance Limit)** | 115,000.0 MBF Softwood Per Year (for Combined Kilns; Rolling 12-Month Period) | The facility shall monitor and record the throughput of softwood dried in all kilns both weekly and on a rolling 52-week period. |
| Final Moisture Content (Softwood) | Federally Enforceable Permit to Construct Issued on October 3, 2018 | ≥ 12% | The facility shall monitor and record the moisture content of dried lumber processed in planer mill area based on a rolling 12-month average.  |

PUBLIC PARTICIPATION

The 30-day public notice period will begin on March 25, 2020 and will end on April 24, 2020 with a copy of the notice being published in the Vicksburg Post.