

State Registration Number
N1722

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N1722-2022

Biewer Sawmill Incorporated

State Registration Number (SRN): N1722

Located at

6251 Gerwoude Drive, McBain, Missaukee County, Michigan 49657

Permit Number: MI-ROP-N1722-2022

Staff Report Date: April 18, 2022

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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RENEWABLE OPERATING PERMIT

APRIL 18, 2022 - STAFF REPORT

ROP Number

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Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

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|---|--|
| Stationary Source Mailing Address: | Biewer Sawmill Incorporated 6251 Gerwoude Drive McBain, Michigan 49657 |
| Source Registration Number (SRN): | N1722 |
| North American Industry Classification System (NAICS) Code: | 321113 |
| Number of Stationary Source Sections: | 1 |
| Is Application for a Renewal or Initial Issuance? | Initial Issuance |
| Application Number: | 202100110 |
| Responsible Official: | Shawn Johnston, General Manager 231-942-1640 |
| AQD Contact: | Kurt Childs, Senior Environmental Quality Analyst 231-878-2045 |
| Date Application Received: | July 13, 2021 |
| Date Application Was Administratively Complete: | July 13, 2021 |
| Is Application Shield in Effect? | Yes |
| Date Public Comment Begins: | April 18, 2022 |
| Deadline for Public Comment: | May 18, 2022 |

Source Description

Biewer Sawmill, Inc – McBain Mill (Biewer) owns and operates a lumber sawmill located in an industrial park in the northwest corner of the village of McBain, Missaukee County, Michigan. The village of McBain had a 2020 population of 670. There are two schools located within the village, McBain High School and Northern Michigan Christian School. The surrounding area is rural with most land in agricultural use. The topography of the immediate area is mostly level. The Biewer Sawmill in McBain was the first sawmill built by Biewer Lumber in 1984. This facility handles a majority of Michigan's log procurement. Biewer produces dimensional lumber from spruce and pine logs. The sawmill is fully automated, modern, vertically integrated and considered to be one of the largest-volume, random-length mills in the Midwest.

The mill consists of green end operation to include log receipt and preparation. Debarked logs enter the sawmill building. Logs are converted into various size green lumber by a variety of sawmill equipment. Emissions from this equipment are released only into the sawmill building. Collected sawdust is blown to the two fuel green sawdust storage silos for use in the wood boiler, EU-WOODBOILER (PTI 89-20) with cyclone and electrostatic precipitator for control, or shipping offsite. Chips and bark are mechanically conveyed for shipment offsite. EU-WOODBOILER is subject to 40 CFR Part 60, Subpart Dc - NSPS for Small Industrial-Commercial-Institutional Steam Generating Units and 40 CFR Part 63, Subpart JJJJJ-NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.

Green lumber exits the sawmill building and is sent to either EU-BATCHKILNS (PTI 10-21) (steam heated by EU-WOODBOILER) or EU-CDK (PTI 104-18) continuous drying kilns (heated by direct fired natural gas) for drying. Dried rough lumber from the lumber kilns is finished in FG-PLANERSYS20 the planer mill building, and exhausts through a cyclone control device.

Bark, sawdust, and shavings are produced from the process including chippers and grinders. The byproducts are conveyed to storage piles or silos. Byproducts are loaded into trailers to be trucked offsite.

Biewer Sawmill, Inc. also maintains a fire pump at the facility with a compression ignition engine that is subject to 40 CFR Part 60, Subpart IIII - NSPS for Stationary Compression Ignition Engines (ICE).

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2020**.

TOTAL STATIONARY SOURCE EMISSIONS

| Pollutant | Tons per Year |
|------------------------------------|----------------------|
| Carbon Monoxide (CO) | 122 |
| Lead (Pb) | <1 |
| Nitrogen Oxides (NO _x) | 48 |
| Particulate Matter (PM) | 5 |
| Sulfur Dioxide (SO ₂) | 5 |
| Volatile Organic Compounds (VOCs) | 60 |

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2021 by Biewer Sawmill, Incorporated:

| Individual Hazardous Air Pollutants (HAPs) ** | Tons per Year |
|--|----------------------|
| Acetaldehyde | 1.30 |
| Acrolein | 1.22 |
| Benzene | 1.11 |
| Chlorine | 0.21 |
| Dichloromethane | 0.08 |
| Formaldehyde | 1.70 |
| Hydrogen chloride | 5.03 |
| Methanol | 7.32 |
| POM | 0.00 |
| Propionaldehyde | 0.10 |
| Naphthalene | 0.03 |
| Styrene | 0.50 |
| Toluene | 0.25 |
| Arsenic | 0.01 |
| Beryllium | 2.93E-04 |
| Cadmium | 1.25E-03 |
| Chromium | 0.01 |
| Cobalt | 1.73E-03 |
| Manganese | 0.42 |
| Mercury | 9.65E-04 |
| Nickel | 0.01 |
| Selenium | 7.44E-04 |
| Total Hazardous Air Pollutants (HAPs) | 19.58 |

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Missaukee County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants. The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of carbon monoxide exceeds 100 tons per year.

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451, because at the time of New Source Review permitting the potential to emit of carbon monoxide was less than 250 tons per year.

EU-WOODBOILER at the stationary source is subject to the Standards of Performance for the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc. EU-WOODBOILER is subject to Subpart Dc because it was installed after 2006 and, at 60.4MMBTU/hr, is within the applicability range of 10 - 100 MMBTU/hr. The requirements for Subpart Dc are incorporated into EU-WOODBOILER. EU-WOODBOILER at the stationary source is also subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources promulgated in 40 CFR Part 63, Subparts A and JJJJJJ. EU-WOODBOILER is subject to Subpart JJJJJJ because the boiler was constructed before June 4, 2010 and is an existing large (60.4 MMBTU/hr) biomass-fired industrial boiler. The requirements for Subpart JJJJJJ are contained in FG-GACT-JJJJJJ-WOODBOILER.

EU-FPE at the stationary source is subject to the Standards of Performance for Stationary Compression Ignition Engines (ICE) promulgated in 40 CFR Part 60, Subparts A and IIII. EU-FPE is subject to Subpart IIII because the engine is a 113 hp fire pump engine with a displacement of less than 30 liters per cylinder and was manufactured in December 2018 as a TIER 3 certified engine. The requirements for Subpart IIII are contained in EU-FPE. EU-FPE is also subject to the National Emission Standard for Hazardous Air Pollutants for Stationary RICE promulgated in 40 CFR Part 63, Subparts A and ZZZZ, however, compliance with NESHAP ZZZZ is demonstrated by meeting the requirements of NSPS IIII. Therefore, no Subpart ZZZZ requirements are included in this ROP.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

EU-WOODBOILER, EU-PLANER20, EU-ENDTRIMMER20, and EU-BLOCKGRDR20 are PM pollutant-specific emission units at this source subject to 40 CFR Part 64 requirements. However, a Compliance Assurance Monitoring (CAM) plan was not required for this source with the submittal of the initial ROP application in accordance with the "Deadlines for Submittals" in 40 CFR 64.5. A CAM plan was not required since all of the emission units subject to CAM are not "Large Pollutant-Specific Emissions Units", they are "Other Pollutant-Specific Emissions Units" (emission units with potential to emit greater than major source thresholds without control but less than major source thresholds with control). Pursuant to 40 CFR 64.5(b), "the owner or operator of this source shall submit the information required under 40 CFR 64.4 as part of an application for a renewal of a Part 70 permit." Therefore, a CAM plan will be required with the application for renewal of this ROP. EU-BATCHKILNS, EU-CDK, and EU-FPE are CAM exempt pollutant-specific emission units at this source. These pollutant-specific emission units have emission limits but do not use a control device.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-Wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

There were no processes listed in the ROP Application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by EGLE, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Shane Nixon, Cadillac District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

State Registration Number
N1722

RENEWABLE OPERATING PERMIT
JUNE 08, 2022 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-N1722-2022

Purpose

A Staff Report dated April 18, 2022, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

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|-----------------------|---|
| Responsible Official: | Shawn Johnston, General Manager 231-942-1640 |
| AQD Contact: | Kurt Childs, Senior Environmental Quality Analyst 231-878-2045 |

Summary of Pertinent Comments

Comments were received from the USEPA regarding Special Condition IV.1 of EU-WOODBOILER. Specifically, the US EPA commented:

"In Conditions IV(1) of EU-WOODBOILER, it states that the emission unit will not operate unless the multiple cyclone pre-cleaner and electrostatic precipitator are installed, maintained, and operated in a satisfactory manner. However, there is no further detail as to determine satisfactory operating conditions within the permit. In order to assure practical enforceability of the PM limits established for the emission unit, we recommend that additional language be added to provide clarity and specificity to the operating conditions that determine satisfactory manner."

Changes to the April 18, 2022 Draft ROP

In response to the US EPA comments, Special Conditions IV.2 and V.2 were added to clarify that a "satisfactory manner" means operating in accordance with specific control device operating parameters established during stack testing and identified in the MAP.

An additional testing requirement was added in SC V.2 of EU-WOODBOILER to require PM and PM10 testing since the limits are greater than the applicable significance levels for each pollutant and to establish acceptable control device operating ranges.

The comments affected existing Special Conditions that originated in PTIs. Current AQD policy does not allow alteration of such Special Conditions. Therefore, it was necessary to add new Special Conditions in order to address these comments.