

State Registration Number  
B7192

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-B7192-2020b

**Billerud Quinnesec, LLC  
and  
Specialty Minerals (Michigan) Inc.**

Located at

W-6791 US Highway 2 and W-6705 US Highway 2, Quinnesec, Dickinson County, Michigan 49876

Permit Number:	MI-ROP-B7192-2020b
Staff Report Date:	January 13, 2020
Amended Date:	April 18, 2022 October 17, 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**

**JANUARY 13, 2020 - STAFF REPORT**

ROP Number

MI-ROP-B7192-2020

**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 of 1990 and Michigan's Administrative Rules for Air Pollution Control pursuant to 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**

Stationary Source Mailing Address:	Verso Quinnesec, LLC W-6791 US Highway 2 Quinnesec, Michigan 49876  Specialty Minerals (Michigan) Inc. W-6705 US Highway 2 Quinnesec, Michigan 49876
Source Registration Number (SRN):	B7192
North American Industry Classification System (NAICS) Code:	Verso Quinnesec, LLC – Quinnesec Mill 322121  Specialty Minerals (Michigan) Inc. 325180
Number of Stationary Source Sections:	2
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201700152
Responsible Official (Section 1):	Michael Glodowski, Mill Manager Verso Quinnesec, LLC 906-779-3201
Responsible Official (Section 2):	Gansh Thulasi Thulasidoss, Regional Operations Manager Specialty Minerals (Michigan) Inc. 484-456-8453
AQD Contact:	Joseph Scanlan, Environmental Quality Analyst 906-458-6405
Date Application Received:	December 1, 2017
Date Application Was Administratively Complete:	December 1, 2017
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	January 13, 2020
Deadline for Public Comment:	February 12, 2020

## Source Description

### Section 1 - Verso Quinnesec, LLC – Quinnesec Mill

Verso Quinnesec, LLC – Quinnesec Mill, formerly International Paper Corporation and prior to that, Champion International Corporation is a Kraft pulp and paper mill that was constructed in Quinnesec, Dickinson County, Michigan, in 1981. The mill converts hardwood logs into wood pulp and paper through a variety of process operations.

The hardwood pulp is produced from roundwood, which is chipped on-site or from purchased chips delivered to the Mill. The Kraft cooking process is used to separate the lignin and wood fiber to produce unbleached pulp from wood chips. Pulp is produced in a continuous digester, washed, separated from wood knots, and screened. The pulp is further delignified in oxygen reactors. After oxygen delignification, the pulp is further washed and bleached.

The organic or lignin laden filtrates (black liquor) from the pulping, oxygen delignification, and washing processes are concentrated through evaporators. The black liquor generated in this process is concentrated and burned in a recovery furnace. The recovery furnace produces steam for energy generation and heat for the pulp and paper making processes. The molten inorganic ash (smelt) from the recovery furnace is dissolved in water to make green liquor, which is processed into reusable cooking chemicals. The causticizing process combines lime with the green liquor in a slaker reactor to produce sodium hydroxide and sodium sulfide solution (white liquor). The lime mud from slaking is washed and then re-burned in a rotary kiln to produce reusable lime.

The mill uses two power boilers to produce steam for energy generation and to provide heat for the pulping and paper making processes. The mill operates steam-driven turbines to produce a portion of the electricity required by the facility.

Product paper is manufactured from a combination of hardwood pulp produced on-site and purchased pulp on the mill's Q-41 paper machine. Market pulp from on-site production is produced on the mill's Q-40 pulp drying machine. Paper produced on the Q-41 Paper Machine is processed and shipped in roll form to final customers. Market pulp is produced on the Q-40 pulp-drying machine as bales of sheets for final sale.

### Section 2 - Specialty Minerals, Inc.

Specialty Minerals, Inc. operates process equipment at Verso Quinnesec, LLC – Quinnesec Mill (Quinnesec Mill). The process equipment operated by Specialty Minerals, Inc. is identified as a second section or partition of the Quinnesec Mill proposed Renewable Operating Permit. These processes use exhaust gases from either the lime kiln, waste fuel boiler, or the package boiler as a CO<sub>2</sub> source for precipitated calcium carbonate (PCC) production. The process equipment includes PCC storage silos and transfer operations.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year 2018.

#### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons per Year</b>
Carbon Monoxide (CO)	952.5
Lead (Pb)	0.03
Nitrogen Oxides (NO <sub>x</sub> )	1152
Particulate Matter (PM)	195
Sulfur Dioxide (SO <sub>2</sub> )	154

Pollutant	Tons per Year
Volatile Organic Compounds (VOCs)	54
Ammonia	54

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2018 by the facility:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
HCl	1.46
Methanol	0.50
<b>Total Hazardous Air Pollutants (HAPs) reported</b>	<b>1.96</b>

\*\*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 Dickinson 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 all criteria pollutants exceeds 100 tons per year, and the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

EU0204-1, EU0368-1, EU0508-1, EU0513-1, EU0514-1, EU0765-1, EU0767-1, EU0815-1, EU0816-1, EU0917-1, EU1019-1, EU1121-1, EU1122-1, EU1125-1, EU1127-1, EU1137-1, FG2334-1, FGWFBMOD-1, EU2550-2, and EU2551-2 at the stationary source were subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of all criteria pollutants was greater than 100 tons per year.

At this time, there are no Greenhouse Gas (GHG) applicable requirements to include in the ROP. The mandatory GHG reporting rule under 40 CFR Part 98 is not an ROP applicable requirement and is not included in the ROP.

EU0508-1, EU0512-1, and EU0514-1, EU0610-1, EU0611-1 and EU0815-1 are subject to Toxics review under Rule 224.

EU0204-1, EU0205-1, EU0368-1, EU0765-1, EU0766-1, EU0767-1, EU0815-1, EU0816-1, and EU0917-1, at the stationary source are subject to the New Source Performance Standards for Kraft Pulp Mills promulgated in 40 CFR Part 60, Subparts A and BB.

Because EU2334-1 and EU2335-1 each consisted of multiple emission units and systems with similar regulatory requirements under 40 CFR Part 63, Subpart S, each was changed to its own flexible group: FG2334-1 and FG2335-1 respectively. FG2334-1 includes EU0203-1, EU0204-1, EU0205-1, EU0765-1, EU0766-1 and EU0767-1. FG2335-1 includes EU0368-1 and EU0460-1.

FGBBKRAFT-1 was created to include the following emission units having similar applicable regulatory requirements under 40 CFR Part 60, Subpart BB: EU0203-1, EU0204-1, EU0205-1, EU0368-1, EU0765-1, EU0766-1, and EU0767-1.

FGBLEACH-1 was created to consolidate the emission unit conditions of EU0508-1, EU0513-1 and EU0514-1 because they have similar applicable requirements and are more appropriate as a flexible group.

FGQ41STARARCH-1 was created to consolidate the emission unit conditions of EU1229-1, EU1239-1, and EU1240-1 because they have similar applicable requirements and are more appropriate as a flexible group.

FGSOLIDFUEL-1 was created to consolidate the emission unit conditions of EU1125-1, EU1127-1 and EU1137-1 because they have similar applicable requirements and are more appropriate as a flexible group.

EU1121-1 and EU1122-1 at the stationary source are subject to the New Source Performance Standards for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971 promulgated in 40 CFR Part 60, Subparts A and D, and the Maximum Achievable Control Technology (MACT) standards under the National Emission Standard for Hazardous Air Pollutants for Major Sources for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63, Subpart DDDDD. The Boiler MACT has been cited as an applicable requirement in EU1121-1 and EU1122-1 tables.

EU0368-1, EU0460-1, EU0508-1, EU0513-1, EU0514-1, EU0767-1, EU2336-1, FG2334-1 and FG2335-1 at the stationary source are subject to the Maximum Achievable Control Technology Standards for the Pulp and Paper Industry promulgated in 40 CFR Part 63, Subparts A and S.

EU0815-1, EU0816-1 and EU0917-1 at the stationary source are subject to the Maximum Achievable Control Technology Standards for the Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi-chemical Pulp Mills promulgated in 40 CFR Part 63, Subparts A and MM.

EU2336-1 at the stationary source is subject to the MACT standards for the Individual Drain Systems promulgated in 40 CFR Part 63, Subparts A and RR.

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."

Because EU0815-1 and EU0816-1 are subject to the MACT Standards for the Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi-chemical Pulp Mills promulgated in 40 CFR Part 63, Subparts A and MM. EU1121-1 is subject to the MACT standards under the National Emission Standard for Hazardous Air Pollutants for Major Sources for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63, Subpart DDDDD the Compliance Assurance Monitoring (CAM) requirements are not applicable to these three emission units based upon Section 64.2 of the Part 64 CAM rules.

EU0101-1, EU0102-1, EU0815-1 and FGSOLIDFUEL-1 (EU1125-1, EU1127-1, EU1128-1 and EU1137-1) at the stationary source are subject to the federal CAM rule under 40 CFR Part 64. These emission units have control devices and potential pre-control emissions of particulate matter greater than the major source threshold level.

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring	Presumptively Acceptable Monitoring?
EU0101-1	PM	40 CFR 52.21(j)(3)	Baghouse	Pressure drop	No
EU102-1	PM	R 336.1331(1)(c)	Baghouse	Pressure drop	No
EU0815-1	PM	40 CFR 52.21(j)(3)	ESP	Opacity/COMS	No
EU0816-1	PM	40 CFR 52.21(j)(3)	Wet Scrubber	Scrubber liquid flow rate	No
EU1125-1	PM	40 CFR 52.21(j)(3)	Baghouse	Pressure drop/CMS	No
EU1127-1	PM	40 CFR 52.21(j)(3)	Baghouse	Pressure drop/CMS	No
EU1128-1	PM	40 CFR 52.21(j)(3)	Baghouse	Pressure drop	No
EU1137-1	PM	40 CFR 52.21(j)(3)	Baghouse	Pressure drop/CMS	No

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.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-B7192-2013 are identified in Appendix 6 of the ROP.

PTI Number			
33-80	33-80A	33-80B	33-80C
33-80D	33-80E	179-87	652-87
749-87	65-88	24-90A	829-92
381-94	69-05A	257-05	67-07
379-07	55-12	55-12A	55-12B

**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**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
23-TK-020	Two (2) 12,000-gallon diesel tanks	Rule 212(4)(c)	Rule 284(d)
01-CU-006 – 01-CU-031	Space Heaters #1-7, Wood Prep Building	Rule 212(4)(b)	Rule 282(b)(i)
11-CU-005 – 11-CU-013	Natural gas heaters #1 – 9	Rule 212(4)(b)	Rule 282(b)(i)
16-CU-042	Natural gas heater	Rule 212(4)(b)	Rule 282(b)(i)
16-CU-043	Natural gas heater #2 Waste	Rule 212(4)(b)	Rule 282(b)(i)
16-CU-050 – 16-CU-051	Natural gas heaters #1 and 2, Aeration	Rule 212(4)(b)	Rule 282(b)(i)
16-CU-058	Natural gas heater Polymer Building	Rule 212(4)(b)	Rule 282(b)(i)
16-CU-064	Natural gas heater Effluent	Rule 212(4)(b)	Rule 282(b)(i)
23-CU-005	Admin. Building Boiler	Rule 212(4)(b)	Rule 282(b)(i)
23-CU-008 – 23-CU-017	Natural gas heaters #1 – 10	Rule 212(4)(b)	Rule 282(b)(i)

**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 Mr. Ed Lancaster, Marquette 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.

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**RENEWABLE OPERATING PERMIT**

ROP Number  
MI-ROP-B7192-2020

**APRIL 23, 2020 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated January 13, 2020, 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**

Responsible Official (Section 1):	Dennis Perpich, Mill Manager 906-779-3201
Responsible Official (Section 2):	Christopher Damm, Plant Manager 331-481-0521
AQD Contact:	Joseph Scanlan, Environmental Quality Analyst 906-458-6405

**Summary of Pertinent Comments**

This Addendum is to explain the events that occurred since the end of the combined public comment period, on February 12, 2020, for the draft ROP No. MI-ROP-B7192-20XX.

The AQD's response to pertinent comments follows.

**Changes to the January 13, 2020 Draft ROP**

**Verso Comment:**

Verso maintains that 40 CFR 60.283(a)(2) is an inappropriate underlying applicable requirement for the TRS limits set forth in SCs I.6, I.7, I.8, and I.9 for EU0815-1 Recovery Furnace and that the notation of the UAR should be deleted.

**AQD Response:**

AQD agrees. The TRS limits for EU0815-1 Recovery Furnace SCs I.6, I.7, I.8, and I.9 are not required by 40 CFR 60.283(a)(2), but rather by the other underlying applicable requirements listed. The UAR was deleted as requested for the listed Special Conditions.

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**RENEWABLE OPERATING PERMIT**  
**APRIL 18, 2022 - STAFF REPORT FOR RULE 216(2)**  
**MINOR MODIFICATION**

ROP Number  
MI-ROP-B7192-2020a

**Purpose**

On June 11, 2020, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-B7192-2020 to Verso Paper Corporation, Verso Quinnesec, LLC - Quinnesec Mill, and Specialty Minerals (Michigan) Inc. pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

**General Information**

Responsible Official:	Dennis Perpich, Mill Manager 906-779-3201
AQD Contact:	Caryn E. Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202200087
Date Application for Minor Modification was Submitted:	April 7, 2022

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

**Description of Changes to the ROP**

To update the CAM indicator range of the differential pressure for the Donaldson baghouse for emission unit EU0102-1, SC VI.3 and SC VI.4, in Section 1 of the ROP. The new indicator range was based on the manufacturer's recommendation, and the range should be between 0.5 to 10.0 inches water column.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

**Action Taken by EGLE**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-B7192-2020, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.

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**RENEWABLE OPERATING PERMIT**

ROP Number  
MI-ROP-B7192-2020b

**OCTOBER 17, 2022 - STAFF REPORT FOR  
RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE  
AMENDMENT**

**Purpose**

On June 6, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-B7192-2020a to Verso Paper Corporation, Verso Quinnesec, LLC - Quinnesec Mill, and Specialty Minerals (Michigan) Inc. pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(1)(a)(i-iv).

**General Information**

Responsible Official:	Dennis Perpich, Mill Manager 906-779-3201
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202200188
Date Application for Administrative Amendment was Submitted:	July 1, 2022

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(iv).

**Description of Changes to the ROP**

This Administrative Amendment was for a transfer of ownership from Verso Quinnesec LLC - Quinnesec Mill to Billerud Quinnesec LLC, which took place July 1, 2022.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Administrative Amendment to the ROP.

**Action Taken by EGLE**

The AQD approved an Administrative Amendment to ROP No. MI-ROP-B7192-2020a, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.