

State Registration Number  
N5940

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N5940-2019a

**PotlatchDeltic Land & Lumber, LLC – Gwinn Lumber**

State Registration Number (SRN): N5940

Located at

650 A. Avenue, Gwinn, Marquette County, Michigan 49841

Permit Number: MI-ROP-N5940-2019a

Staff Report Date: April 15, 2019

Amended Date: November 15, 2019

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 15, 2019 - STAFF REPORT**

**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**

Stationary Source Mailing Address:	PotlatchDeltic Land & Lumber, LLC – Gwinn Lumber 650 A. Avenue Gwinn, Michigan 49841
Source Registration Number (SRN):	N5940
North American Industry Classification System (NAICS) Code:	321113
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201800041
Responsible Official:	Ron Salisbury, Mill Manager 906-346-8214
AQD Contact:	Michael Conklin, Environmental Engineer 906-202-0013
Date Application Received:	March 23, 2018
Date Application Was Administratively Complete:	March 23, 2018
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 15, 2019
Deadline for Public Comment:	May 15, 2019

## **Source Description**

PotlatchDeltic Land and Lumber, LLC (PotlatchDeltic) is a forest product and real estate company based out of Spokane, Washington. In February 2018, Potlatch acquired Deltic Timber Corporation, an Arkansas timber company, and was renamed PotlatchDeltic Corporation. The company owns nearly 2.0 million acres of forestland in Alabama, Arkansas, Idaho, Louisiana, Minnesota, and Mississippi. These forestlands are used for timber production and occasionally used for sales of parcels or leased for recreational use. PotlatchDeltic also owns and operates six sawmills producing lumber, panels, and particleboard.

The Gwinn Lumber facility is one of PotlatchDeltic's six sawmills with a lumber production capacity of 220 million board feet per year (MMBf/yr). The facility is located at 650 Avenue A, Gwinn, MI, a flat rural area in Marquette County that is in attainment for all criteria pollutants. Gwinn Lumber was originally constructed in 1998 following the issuance of Permit to Install (PTI) No. 299-96. This stationary, automated mill processes softwood species of Jack Pine, Red Pine, Spruce, Balsam, White Pine, and Tamarack into dimensional lumber. Wood chips, sawdust, and waste that are generated onsite are sold or burned in the wood-fired boilers.

The mill process starts with green logs being debarked and sorted based on size. Logs entering a saw mill are considered "green" meaning they have a naturally higher moisture content than the final dry lumber product. The green logs are then laser scanned and rough cut into lumber by an automated saw. Rough cut lumber is stacked and enters one of four kilns for drying. After the lumber has reached the desired moisture content, the lumber is fed through a planer system that trims and edges the lumber into the final stud length. The lumber then passes through a machine that grades the lumber based on quality indicators. After the lumber is graded, it is sorted, bundled, and shipped to customers.

Emission units for this source include: two 28.7 MMBTU/hour wood-fired boilers (EU-WOODBOILER1-2), a 48.8 MMBTU/hour natural gas-fired boiler (EU-GASBOILER), four lumber drying kilns (EU-DRYKILN1-4), a planer and trimmer system (EU-PLANER and EU-ENDTRIMMER1-3), conveyors (EU-TRAILERS), a pneumatic separator (EU-PNEUMATICLINE), two fire pumps (EU-FIREPUMP1-2), and an emergency generator (EU-GENERATOR). Multiclones provide particulate control for the wood boilers. A baghouse provides particulate control for the planer system. There are no emission controls on the kilns, fire pumps, or emergency generator. Process machines in the mill, such as saws, conveyors, and separators are all electrically powered.

Since the issuance of MI-ROP-N5940-2013, PTI No. 59-18 has been issued and included into this ROP renewal. PTI No. 59-18 reviewed the proposed addition of two natural gas fired burners for Kiln 4 and requested changes to special conditions in the ROP. A summary of the changes includes decreasing single and aggregate HAP emission limits for the source to 9 tpy and 24 tpy to avoid the facility from being a major source for HAPs and to be below 90% of the threshold. EU-PNEUMATICLINE's description was changed by removing "controlled by a cyclone", since the cyclone is part of the material collection process and not a control device. Two 11 MMBtu/hr natural gas-fired burners were proposed to be installed into Kiln 4. This was determined to be exempt per Rule 291. The supplier for the burners ended up sending one 20 MMBtu/hr burner instead of two 11 MMBtu/hr burners. Since the burner received is less than the total heat input rate of the two combined, the Rule 291 exemption is still applicable. The methanol emission limit in FG-DRYKILNS was removed. Since there are single and aggregate HAP limits for source-wide, it was determined that the methanol (HAP) limit could be removed from FG-DRYKILNS and would be covered under the source-wide single HAP limit of 9 tpy. The material limits for Red Pine and Wood were increased in FG-DRYKILNS, and emissions testing to correlate PM emissions with the differential pressure across the baghouse was removed in FG-PLANERSYSTEM. PotlatchDeltic requested that the PM emissions testing be removed from FG-PLANERSYSTEM because previous test results showed emission rates well below the emission limits. An indicator range of 0.1-6.0 inches of water column ("WC) ensures compliance with PM emissions. The emission unit, EU-CONVEYOR, was removed and is covered under the Fugitive Dust Plan. This is an enclosed belt conveyor that transfers chips from the screen to the pneumatic blow line through a rotary air lock.

PotlatchDeltic has received one Letter of Violation (LOV) for failing to meet the emission limits for FG-DRYKILNS during the March 2014 test on Kiln #4. The test results showed emission rates for VOCs and methanol from Jack and Red Pine to be above permitted limits. PotlatchDeltic requested a retest and the Department approved retesting on the kiln in May 2014. The company re-tested in June 2014 and results showed that the kiln was in compliance with both emission limits under FG-DRYKILNS and Source-Wide in the ROP. In February 2017, PTI No. 30-16 was incorporated into ROP-N5940-2013 as a ROP modification. This PTI removed the stack requirements for Kiln #4 and the associated testing. The stack on Kiln #4 was replaced with roof vents similar to the other three kilns.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year 2017.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	0.005
Lead (Pb)	0.006
Nitrogen Oxides (NO <sub>x</sub> )	0.024
Particulate Matter (PM)	49.05
Sulfur Dioxide (SO <sub>2</sub> )	0.002
Volatile Organic Compounds (VOCs)	125.25

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2016 by PotlatchDeltic:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Methanol	6.49
Acetaldehyde	2.90
Phenol	1.30
All other HAPs	<1
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>14.05</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 Marquette 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 nitrogen oxides, carbon monoxide, volatile organic compounds, and particulate matter exceed 100 tons per year.

The stationary source is a "synthetic minor" source regarding HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, to less than 10 tons per year and the potential to emit of all HAPs combined to 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 each criteria pollutant was less than 250 tons per year.

EU-WOODBOILER1, EU-WOODBOILER2, and EU-GASBOILER at the stationary source are subject to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc.

EU-GENERATOR at the stationary source is subject to the Standards of Performance for Compression Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and IIII.

EU-WOODBOILER1, EU-WOODBOILER2, and EU-GASBOILER at the stationary source are 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-FIREPUMP1, EU-FIREPUMP2, and EU-GENERATOR at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines Area Sources promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

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-WOODBOILER1 and EU-WOODBOILER2 do not have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 40 CFR Part 64, because the units do not have potential pre-control emissions over the major source thresholds. EU-WOODBOILER1 and EU-WOODBOILER2 both have primary and secondary multiclones for control devices and exhaust out individual stacks. Therefore, potential pre-control emissions were evaluated for each individual wood boiler rather than collectively in FG-WOODBOILERS. The single highest regulated pollutant pre-control emissions for each wood boiler is 73 tpy for PM. This was calculated using the equation below.

$$0.58 \frac{lb PM}{MMBtu} (Emission Factor) \times 28.7 \frac{MMBtu}{Hr} (Max Boiler Capacity) \times 8760 Hr \times \frac{1 ton}{2000 lb} = 73 tpy$$

The following Emission Units/Flexible Groups are subject to CAM:

<b>Emission Unit/Flexible group ID</b>	<b>Pollutant/ Emission Limit</b>	<b>UAR(s)</b>	<b>Control Equipment</b>	<b>Monitoring (Include Monitoring Range)</b>	<b>Emission Unit/Flexible Group for CAM</b>	<b>PAM? *</b>
FG-PLANERSYSTEM	PM / 0.01 gr/dscf of exhaust air	R 336.133 1(1)(c)	Baghouse	Differential Pressure Gauge / 0.1-6.0 inches of water	FG-PLANERSYSTEM	No
FG-PLANERSYSTEM	PM / 5.2 lb/hr	R 336.133 1(1)(c)	Baghouse	Differential Pressure Gauge / 0.1-6.0 inches of water	FG-PLANERSYSTEM	No

\*Presumptively Acceptable Monitoring (PAM)

The emission limitations for PM from FG-PLANERSYSTEM at the stationary source are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64. This flexible group has a control device and potential pre-control emissions of PM greater than the major source threshold level. The potential pre-control emissions for PM10 and PM2.5 are 338 tpy. The emissions units EU-PLANER, EU-ENDTRIMMER1, EU-ENDTRIMMER2, EU-ENDTRIMMER3, EU-TRAILERS make up FG-PLANERSYSTEM and exhaust out a single point from the baghouse.

The Compliance Assurance Monitoring (CAM) plan for FG-PLANERSYSTEM assures compliance with particulate emissions through the monitoring and recording the differential pressure across the baghouse once per day. The baghouse is also inspected and maintained once per day, and the differential pressure gauge is re-calibrated semiannually. A performance test conducted in March of 2014 established a pressure differential indicator range that correlates with particulate emissions. Test results showed PM emission rates of 0.00004 gr/dscf and 0.015 lb/hr. The indicator range of 0.1-6.0 inches of water column ("WC) ensures compliance with PM emissions. An excursion is an indicator range reporting outside of 0.1-6.0 "WC. Visible emission readings are also taken per USEPA Method 9 once a month to ensure visible emissions are less than 20% opacity (6-min average). An excursion is an opacity reading greater than 20%. The established indicator range also correlates to an opacity of less than 20%. Any excursions of these monitoring approaches trigger immediate inspection, corrective action, and reporting.

This CAM plan for FG-PLANERSYSTEM will ensure that PotlatchDeltic will operate and maintain the baghouse in a manner that will assure compliance with particulate emissions. The pressure drop indicator can indicate if a cleaning cycle is not frequent enough, cleaning equipment has been damaged, and if there are tears or missing bags. Thus, a pressure drop indicator for the baghouse is a viable performance indicator and will ensure proper operation for the control of particulate emissions.

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 MI-ROP-N5940-2013 are identified in Appendix 6 of the ROP.

PTI Number			
299-96	299-96A	127-02	127-02A
127-02B	128-02	131-02	77-07
382-07			

**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>
EU-PARTSWASHER	Four parts washers with air/vapor interface of less than 10 square feet	R 336.1212(4)(b)	R 336.1281(2)(h)
EU-GASOLINETANK	500 gallon gasoline tank, vented to atmosphere	R 336.1212(4)(c)	R 336.1284(2)(g)
EU-SAWFILE	Sawfiling system with dust collector/filtration system	R 336.1212(4)(d)	R 336.1285(2)(l)(vi)
EU-KILN4BURNER	20 MMBtu/hr natural gas fired burner for kiln 4	R 336.1212(4)(i)	R 336.1291(2)

**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 the MDEQ, 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 Ed Lancaster, Upper Peninsula 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

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## RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-N5940-2019

### JUNE 5, 2019 - STAFF REPORT ADDENDUM

#### **Purpose**

A Staff Report dated April 15, 2019, 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:	Ron Salisbury, Mill Manager 906-346-8214
AQD Contact:	Michael Conklin, Environmental Engineer 906-202-0013

#### **Summary of Pertinent Comments**

PotlatchDeltic made additional comments on the emission limit and monitoring/recordkeeping conditions in EU-PNEUMATICLINE. Comments were made to the emission limit table stating that the equipment listed should only include "Truck Bin Material Collection Cyclone" instead of "EU-PNEUMATICLINE". The company believes that a pound per hour PM limit is not applicable to the other portions of the emission unit since they are drop points and not emitting out of a single point or stack. The exhaust out the top of the cyclone is where the emission limit would be applicable. The cyclone is not a control device, however, but is used for the green chips collection process.

The company also commented that they would like to have a visible emission limit for EU-PNEUMATICLINE instead of a pound per hour PM limit. Statements were made that they would like to continue monitoring the cyclone for any visible emissions and if there are any, that corrective action would be taken immediately. Thus, comments were also made to retain non-certified visible emission checks, daily during operation of EU-PNEUMATICLINE, for monitoring/recordkeeping.

#### **Changes to the April 15, 2019, Draft ROP**

It was explained to the company that changes to emission limit conditions cannot occur during a ROP Renewal. The company and the District agreed that a PTI application would be submitted after the issuance of the ROP to modify the emission limit condition in EU-PNEUMATICLINE. Special Condition VI.2 was changed back to retain current language of performing non-certified visible emission checks daily, while operating, and implementing corrective action ensuing any visible emissions observed. Also, the description to EU-PNEUMATICLINE was updated to include "green chips..." to identify the process more specifically.

Additional changes to the Draft ROP include the addition of a recordkeeping appendix, under Appendix 4, for FG-WOODBOILERS to show compliance with SC II.2, 3, and VI.1, and removing "See Appendix 5" under non-applicable testing sections of emission units and flexible groups.

State Registration Number

N5940

## RENEWABLE OPERATING PERMIT

NOVEMBER 15, 2019 - STAFF REPORT FOR  
RULE 216(2) MINOR MODIFICATION

ROP Number

MI-ROP-N5940-2019a

### Purpose

On July 22, 2019, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N5940-2019 to PotlatchDeltic Land & Lumber, LLC - Gwinn Lumber 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:	Ron Salisbury, Mill Manager 906-346-8214
AQD Contact:	Caryn Owens, Environmental Engineer 231-878-6688
Application Number:	201900162
Date Application for Minor Modification was Submitted:	September 16, 2019

### 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

Minor Modification No. 201900162 was to clarify that the Emission Limit established in EU-PNEUMATICLINE applies to the truck bin cyclone, since the other two blow lines (the chip pile and rail car) are drop points that are covered under the facility's Fugitive Dust Plan. Additionally, a testing Condition was added in case the District requests the facility to show they can meet the established Emission Limit. The Company also reports EU-PNEUMATICLINE to the Michigan Air Emission Reporting System (MAERS) on an annual basis that uses emission factors and production data to show compliance with the emission limit.

It should be noted that the original Minor Modification application requested to add a Visible Emissions (VE) Limit to EU-PNEUMATICLINE and modify the Condition for non-certified visible emission observations, but after discussion with the Company, they requested that AQD doesn't add the VE limit at this time. If PotlatchDeltic Land & Lumber, LLC - Gwinn Lumber decides to add the VE limit in the future, the company will go through the Permit Section to add the limit and modify the visible emission observation Condition (SC VI.2).

### 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-N5940-2019, 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.