



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
UPPER PENINSULA DISTRICT OFFICE



DAN WYANT  
DIRECTOR

May 29, 2014

Mr. Ron Salisbury  
Potlatch Land and Lumber, LLC - Gwinn Lumber  
650 A. Avenue  
Gwinn, Michigan 49841

SRN: N5940, Marquette County

Dear Mr. Salisbury:

**VIOLATION NOTICE**

On May 2, 2014, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), received the stack test results for emissions testing conducted at Potlatch Land and Lumber, LLC – Gwinn Lumber, located at 650 A. Avenue, Gwinn, Michigan. The results of this test were reviewed to determine compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules and the conditions of Renewable Operating Permit (ROP) number MI-ROP-N5940-2013.

During the review, staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
Lumber dry kiln VOC as carbon limits (Jack Pine)	ROP-FG-DRYKILNS I(1)	Emission limit exceeded (pounds/1,000 board feet of wood)
Lumber dry kiln VOC as carbon limits (Red Pine)	ROP-FG-DRYKILNS I(1)	Emission limit exceeded (pounds/1,000 board feet of wood)
Lumber dry kiln VOC as carbon limits (total)	ROP-FG-DRYKILNS I(2)	12 month rolling average emission limit exceeded (tons per year)
Lumber dry kiln methanol limits (total)	ROP-FG-DRYKILNS I(3)	12 month rolling average for EU-DRYKILN4 exceeded (tons per year)

A stack test was conducted from March 4 to 13, 2014 to determine compliance with limits specified in your facility's ROP. Results from this testing were provided to the DEQ, AQD, Upper Peninsula District Office (UPDO) for evaluation. The AQD Technical Programs Unit and UPDO staff have reviewed the data and have determine your facility is out of compliance for the conditions listed in the table above.

May 29, 2014

ROP-N5940-2013 states you are limited to 2.08 pounds of VOC as carbon per 1,000 feet of wood dried. Your test results show emissions of 3.52 lbs/mbf for Jack Pine and 2.55 lbs/mbf for Red Pine.

ROP-N5940-2013 states you are limited to 176.8 tons/year of VOC as carbon. Your test results when calculated using production rates from the 12 months prior to the testing show emissions of 198.5 tons/year.

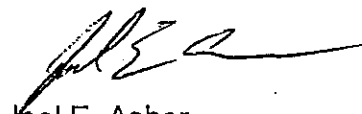
ROP-N5940-2013 states you are limited to <9 tons/year of methanol. Your test results when calculated using production rates from the 12 months prior to the testing show emissions of 13.2 tons/year.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by June 19, 2014 (which coincides with 21 calendar days from the date of this letter). The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

If you believe the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Thank you for your attention to resolving the violations cited above and for the cooperation that was extended to me during my inspection. If you have any questions regarding the violations or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,



Joel E. Asher  
Environmental Quality Analyst  
Air Quality Division  
906 458-5123

JA:KB

Enclosure(s)

cc: Mr. Chris Hare, DEQ  
cc/via email: Ms. Lynn Fiedler, DEQ  
Ms. Teresa Seidel, DEQ  
Mr. Thomas Hess, DEQ



June 6, 2014

Joel E. Asher, Environmental Quality Analyst  
Air Quality Division  
Michigan Department of Environmental Quality  
Upper Peninsula District Office  
1504 West Washington Street  
Marquette, Michigan 49855

RECEIVED

JUN 13 2014

- Air Quality Division

Re: Violation Notice dated May 29, 2014

Dear Mr. Asher:

Potlatch Corporation received a Violation Notice dated May 29, 2014 alleging that the company's wood products mill in Gwinn, Michigan is out of compliance. The Violation Notice requests that Potlatch Corporation initiate actions to correct the alleged violations and to submit a written response by June 19, 2014. This letter response refers to materials previously submitted to the Department that identified the circumstances, explained the cause and duration of the deviations noted by the Department, described the ongoing nature of the deviations, and summarized actions underway to address the allegations and prevent recurrence.

As required by the mill's Renewable Operating Permit MI-ROP- N5940-2013, Potlatch conducted emissions source testing timely last spring. On April 17, 2014, Potlatch met with the Department and voluntarily previewed the test results that showed potential exceedences of methanol emission limits imposed on the mill's dry kilns. On May 2, 2014, Potlatch submitted the source test report and a written explanation of the cause and duration of the results. In that letter, Potlatch explained that the results reflected unrepresentative operating conditions and therefore could not reasonably be relied upon to determine compliance. Potlatch proposed retesting to address the deviations, verify the inappropriateness of the original results, and address the Department's recent allegations. *(A copy of the May 2, 2014 letter is attached.)*

On Thursday, May 22, 2014 the Department requested additional information from Potlatch to further explain actions undertaken to prevent similar operating conditions from recurring. Potlatch promptly provided responses to those questions on Thursday, May 22, 2014. *(A copy of this information is attached.)*

The Department approved retesting by letter dated May 29, 2014. Potlatch will perform retesting during the week of June 9, 2014 to address the allegations and to develop representative emissions factors for use in future compliance demonstrations. *(A copy of the approval letter is attached.)*



On June 4, 2014, representatives of the Department conducted a site visit at the Gwinn mill to observe operations and reconfirm information previously submitted by Potlatch. Potlatch appreciates the time taken by the Department to learn about operation of the Gwinn mill. Specifically, the site visit reconfirmed the following:

- The Gwinn mill processes only green lumber through the dry kilns.
- Moisture content set points determine drying time for each charge.
- Operating conditions for VOC and methanol retesting on June 9, 2014 will be representative of normal kiln operations, unlike circumstances during the March 2014 testing event.

Since April, Potlatch has provided the Department information on the source test results, the potential deviations from permit conditions, and the atypical operating circumstances in March that will certainly be avoided in the future. Presently, Potlatch disagrees with the Department's conclusion that the mill is out of compliance with the emissions limits applicable to the kilns. In particular, Potlatch disagrees with the conclusion that methanol emissions from the mill exceed 10 tons/year. Potlatch's intention is to remain a synthetic minor source for hazardous air pollutants. Current production limitations ensure that minor source status. Retesting under normal operating conditions will generate an appropriate emissions factor for estimating emissions and determining compliance.

Potlatch requests that the Department reconsider its Violation Notice and the facility's compliance status after retesting is complete and a new source test report is available.

In the meantime, if you have any additional questions, please contact me.

Sincerely,

Ron Salisbury  
Gwinn Lumber Mill Manager

cc: L. Scott  
T. Temple  
R. Schimenek



May 2, 2014

Chris Hare, District Supervisor  
Department of Environmental Quality  
Air Quality Division  
Saginaw Bay District Office  
401 Ketchum Street, Suite B  
Bay City, Michigan 48708

Subject: Emission Unit Testing, Permit MI-ROP-N5940-2013

Dear Mr. Hare:

Potlatch Land & Lumber, LLC ("Potlatch") operates the Gwinn Lumber Mill under the conditions of the Renewable Operating Permit MI-ROP-N5940-2013 ("2013 ROP"). Enclosed are the test results received on April 15, 2014, from the March 4 -13, 2014 source wide emission unit tests for the #1 and #2 wood boilers, the planer system (baghouse), and the #4 dry kiln, as required by the 2013 ROP.

The test results showed the two boilers are within the permitted emission limits for all pollutants. The planer system results showed the baghouse is operating within the permitted emission limits for particulate matter (PM). The test results for the #4 dry kiln indicated the VOC emissions factors for both the red pine and jack pine species were higher than previously tested in 2006. The VOC laboratory analysis indicated that the methanol emissions factors were also higher than historic emissions factors.

During a meeting with MIAQD representatives on April 17, 2014, Potlatch voluntarily previewed these results for the agency, and explained the atypical kiln operating circumstances that likely produced the reported emissions factors. Simultaneous source wide testing of the four emissions units occurred at Gwinn employing two source testing teams on-site.

Red pine dry kiln source testing occurred during the same days as source testing for the wood boilers. Review of the results and testing logs indicated that to complete the boiler testing, an



extended run was required. In good faith and to ensure that the boiler source testing continued under representative steam loading conditions, the red pine drying that simultaneously occurred for the dry kiln testing was extended, and ran about 3 hours longer than the typical drying cycle. Consequently, the increased drying time produced atypical emissions factors for methanol and total VOC from the kiln. These circumstances also produced unacceptable, over dried, off specification lumber, confirming the unrepresentativeness of the operating conditions during testing. In light of the circumstances, Potlatch considers the results contained in the enclosed report for the kiln emissions factors to be unrepresentative of normal operations for red pine and unreliable for purposes of determining compliance. In hindsight, simultaneously testing the kilns and boilers presented challenging operating circumstances, and Potlatch will not likely schedule concurrent testing of these units in the future. Potlatch proposes to retest and produce appropriate kiln emissions factors for red pine, using a typical kiln drying cycle.

Similarly, the jack pine test results prompted review of drying time and kiln charge to evaluate the cause of the unexpected emissions factors for this species. Potlatch determined that the kiln was not properly charged during the jack pine testing, causing unrepresentative operating conditions. During the spring in Michigan, the jack pine wood species can be less available, as Potlatch experienced this year. Although Potlatch was managing species inventory in anticipation of the testing, the schedule imposed by the 2013 ROP required testing before sufficient inventory of jack pine logs could be collected for a full kiln charge. Therefore, one dry kiln unit was missing in the jack pine charge during the testing. This unrepresentative operating circumstance is critical to the source testing results, because an empty unit changes the airflow within the kiln, the drying times, and the VOC test results. Under the circumstances, Potlatch considers the reported kiln emissions results during the jack pine test to be unrepresentative of normal operations and unreliable for purposes of determining compliance. In hindsight, Potlatch regrets that the company did not request an extension under the 2013 ROP and assemble sufficient jack pine logs for a full charge. Potlatch proposes to retest and produce appropriate kiln emissions factors for jack pine, using a full kiln charge and a typical kiln drying cycle.

Potlatch is committed to operating the Gwinn mill in compliance with its air quality permit limits. The #4 dry kiln was originally permitted and installed in 2006. Source testing conducted at that time produced emissions factors in 2006 that were relied upon in the application for the 2013 ROP. The recent 2014 test results represent only the second data point for both red and jack pine methanol and VOC emissions factors for the #4 kiln, and these recent test results reflect an atypical drying cycle and an insufficient kiln charge. Relying upon these recent results to determine compliance is inappropriate, in light of the unrepresentativeness of the conditions. Therefore, Potlatch requests authorization to retest the #4 dry kiln as soon as possible.



Potlatch regrets the circumstances that led to these results and is committed to prompt retesting. Once you review this information, Potlatch proposes to meet and discuss next steps. In the meantime, if you have any questions or concerns, please contact me at 906 346-8214.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Salisbury".

Ron Salisbury  
Gwinn Lumber Mill Manager

cc: L. Scott  
T. Temple  
R. Schimenek

## Testing Results / Inaccuracies

The boiler should have been operating at  $\geq 90\%$  load during testing. Is this load too high for the drying of Red Pine? If too high, how did this load/rate prolong the Red Pine charge cycle?

During the Red Pine kiln cycle we were simultaneously testing the boiler. The kiln drying steam load is needed to keep the boilers operating above 90%, which prolonged the kiln drying time.

Is it true that nearly 40% (97,059 board feet or 28 units) of the Jack Pine loaded into the kiln was already dry?

No. We do not include previously dried lumber in a kiln charge. A kiln charge consists of all green lumber and we never deviate from that.

(There may be some confusion on the terminology that we use for dry sort and wet sort. Simply put, a wet sort has a higher moisture content and a dry sort has a lower moisture content. Both are green lumber.)

If over-dried wood gives off more VOC's as stated in the letter from Potlatch dated May 2, 2014, why would this chance to bias the test be taken during the Jack Pine test run?

Unfortunately, we were approaching the 180 day testing requirement per the ROP. At the time, we had a limited amount of Jack Pine to use for the test charge so we mixed the dry sort (green lumber with a lower moisture content) and wet sort (green lumber with a higher moisture content) to make a charge but were still short one unit.

Is adding dry wood to a kiln part of normal process operations?

No. We do not add dried lumber to the kiln charge.

Please restate the reasons the Red Pine and the Jack Pine results are inaccurate that require a retest.

As previously stated in the May 2, 2014 letter...

"Red pine dry kiln source testing occurred during the same days as source testing for the wood boilers. Review of the results and testing logs indicated that to complete the boiler testing, an extended run was required. In good faith and to ensure that the boiler source testing continued under representative steam loading conditions, the red pine drying that simultaneously occurred for the dry kiln testing was extended, and ran about 3 hours longer than the typical drying cycle. Consequently, the increased drying time produced atypical emission factors for methanol and total VOC from the kiln. These circumstances also produced unacceptable, over dried, off specification lumber, confirming the unrepresentativeness of the operating conditions during testing. In light of the circumstances, Potlatch considers the results contain in the enclosed report for the kiln emissions factors to be unrepresentative of normal operations for red pine and unreliable for purposes of determining compliance. In hindsight, simultaneously testing the kilns and boilers presented challenging operating circumstances, and Potlatch will not likely schedule concurrent testing of these units in the future. Potlatch proposes to retest and produce appropriate kiln emissions factors for red pine, using a typical kiln drying cycle."

"Similarly, the jack pine test results prompted review of drying time and kiln charge to evaluate the cause of the unexpected emissions factors for this species. Potlatch determined that the kiln was not properly charged during the jack pine testing, causing unrepresentative operating conditions. During the spring in Michigan, the jack pine wood species can be less available, as Potlatch experienced this year. Although Potlatch was managing species inventory in anticipation of the testing, the schedule



imposed by the 2013 ROP required testing before sufficient inventory of jack pine logs could be collected for a full charge. Therefore, one dry kiln unit was missing in the jack pine charge during the testing. This unrepresentative operating circumstance is critical to the source testing results, because an empty unit changes the airflow within the kiln, the drying times, and the VOC test results. Under the circumstances, Potlatch considers the reported kiln emissions results during the jack pine test to be unrepresentative of normal operations and unreliable for purposes of determining compliance. In hindsight, Potlatch regrets that the company did not request an extension under the 2013 ROP and assemble sufficient jack pine logs for a full charge. Potlatch proposes to retest and produce appropriate kiln emissions factors for jack pine, using a full kiln charge and a typical drying cycle.”

### Operational Process

**During mixed species logging operations, do logging companies separate logs by species before loading onto their truck and delivering to Potlatch?**

Yes. All logs are separated by species before loading onto the trucks.

**How is separation accomplished in a mixed timber stand?**

Separation is accomplished by species.

**What is the average operational rate (% of time / year) that each of the four kilns are functional based on historical records?**

The four kilns operate 75% of the time. This includes all kiln turns, mechanical, electrical, and operational downtimes that are scheduled and non-scheduled.

**What % of kiln downtime is for planned maintenance compared to un-planned maintenance?**

Yearly, both wood boilers and 4 kilns are shut down for maintenance. An individual kiln is taken down as repairs are needed whether it is planned or unplanned.

**What is the turn-around time to unload and then load a kiln (time from kiln shut down to starting a new charge)?**

During the summer a turn-around takes approximately 1 hour. In the winter, a turn-around takes approximately between 1-2 hours to complete due to snow and ice.

**How does the Potlatch yard lay-out keep species separated? How does the individual driving the fork truck know which specie is which so they are not mixed when being loaded?**

In the log yard, species are separated by yard-letter and the tonnage of each species is tracked. In the kiln yard, each bundle is marked with the date / species and separated by species. The fork truck operators use the date and species marked on the bundle to keep the species separate.

**What is the average time logs sit in the yard before being cut and loaded into the kiln? What is the longest? Shortest?**

This can vary depending on log availability and log inventory in the log yard. For example, this time last year the turn-around time was ~1.5 months. Today the turn-around time is ~1 week.

**Are logs that have sat in the yard longer (more environmental drying) mixed with logs that have sat in the yard shorter (less environmental drying)?**

We use the First-In, First-Out method to assure that we use the logs in the order that they are received.

**What emits more VOC's in the kiln drying process: logs that have sat in the yard longer (more environmental drying) or logs that have sat in the yard shorter (less environmental drying)?**

No data is available.



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



DAN WYANT  
DIRECTOR

May 29, 2014

VIA E-MAIL

Mrs. Lauren Lueneburg  
Potlatch Land and Lumber, LLC  
650 A. Avenue  
Gwinn, MI 49841

Dear Mrs. Lueneburg:

**SUBJECT:** Updated Approval for Potlatch Land and Lumber FG-DRYKILNS Emissions  
Compliance Re-Test, MI-ROP-N5940-2013, SRN: N5940

This letter is an update to the letter dated May 22, 2014. The update changes the main method of sampling for Acetaldehyde, Acrolein, Formaldehyde, Methanol, Phenol, and Propionaldehyde from NCASI 99.02, to constant Method 320 sampling. This change was verified verbally via phone with Scott Fjelsta of Interpoll Laboratories on May 28, 2014 and June 2, 2014. It is understood that a formal update to the test plan will not be received.

Testing is being completed due to a failure of VOC as Carbon pound per 1000 board feet of wood, VOC as Carbon tons per year, and Individual HAP- Methanol emission rates from testing completed on March 4-12, 2014. The goal of this test is to demonstrate compliance with MI-ROP- N5940-2013 by sampling the following:

- EU-DRYKILN4
  - Total VOC's; Method 25A through continuous sampling
  - Acetaldehyde, Acrolein, Formaldehyde, Methanol, Phenol, and Propionaldehyde; Method 320 through continuous sampling
  - Stack Gas Velocity/Flow, Method 2 through continuous monitoring
  - Molecular weight, Method 3A through continuous sampling
  - Moisture, Method 320 through continuous sampling
  - Acetaldehyde, Acrolein, Formaldehyde, Methanol, Phenol, and Propionaldehyde; NCASI 99.02, to be conducted with periodically as a check for Method 320

In addition to the methods listed above, testing will be performed in accordance with State of Michigan Part 10 Rules. Method 320 spikes will be via certified methanol and acetaldehyde gases. If Interpoll is not able to secure a certified acetaldehyde spike before the test date, an uncertified spike created by Interpoll for acetaldehyde may be used. All requirements and specifications of the above methods apply; and any modifications of the test methods onsite must be approved by the Air Quality Division.

The following stipulations will apply during testing:

- testing will be performed with kiln at  $\geq 90\%$  operating capacity
- testing will be conducted for 2 charges; once drying red pine only and once drying jack pine only; the mixing of wood for either cycle is not permitted
- upon commencement of testing, the facility shall not cease testing unless there is a forced shutdown, extreme meteorological conditions, or circumstances beyond the operator's control occur
- the quality control (QC) requirements as outlined in Section 12.6 of USEPA Method 7E will be used for Method 25A.

The test report will include:

- graphical depiction of: dscfm, % moisture, % O2 dry, % CO2 dry, VOC as propane ppm, delta p, outlet gas temperature, MC % saturation point, VOC as carbon ppm, and lbs/hr VOC as carbon in color print for the duration of each cycle
- electronic data for method 320 and method 25a on CD, DVD, or e-mail
- page number labels for each page of the report (example: page 1 of 23 or single numbers)
- all pre-test and post-test meter box calibration, pitot tube calibration, and field data sheets
- all laboratory data including quality assurance audits
- gas analyzer calibration error, system bias, zero, and calibration drift data all in tabular format of one minute increments and run averages
- all handwritten field data sheets generated during and for the testing
- any documentation of failed or repeated tests.

The following process data will be recorded during testing and provided in the final report for the equipment as listed:

- total amount by species of wood dried in EU-DRYKILN4 during testing
- amount by species of dry wood added to the kiln
- 12 month rolling amount of Red Pine, Jack Pine, Spruce, and Balsam from one year prior to test end date/time
- 12 month rolling amount of any other species dried in FG-DRYKILNS from one year prior to test end date/time
- Kiln data sheet (depicting dry bulb, wet bulb, moisture content, steam use, board feet, run time, etc.) in color print

A complete copy of the final test results must be sent to each the following two addresses:

Mr. Joel Asher  
Air Quality Division  
1504 W. Washington St.  
Marquette, MI 49855

Ms. Karen Kajiya-Mills  
Supervisor, TPU  
Air Quality Division  
PO Box 30260  
Lansing, MI 48909

This testing is scheduled to begin June 9, 2014. Please advise Mr. Joel Asher of the Upper Peninsula District Office at 906-250-5123, and myself of any changes in the test dates. If you have any questions regarding this letter, please contact me by telephone or e-mail at [huden@michigan.gov](mailto:huden@michigan.gov).

Sincerely,



Nathan Hude  
Technical Programs Unit  
Field Operations Section  
Air Quality Division  
517-284-6779

cc: Ms. Kathy Eickstadt, Interpoll Laboratories, Inc.  
Mr. Ed Juers, Interpoll Laboratories, Inc.  
Mr. Scott Fjelsta, Interpoll Laboratories, Inc.  
Mr. Chris Hare, DEQ  
Mr. Joel Asher, DEQ