NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Person
NC Facility ID: 7300061
Inspector's Name: Abdul Kadir
Date of Last Inspection: 03/31/2021
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Louisiana-Pacific Corporation - Roxboro

Facility Address:
Louisiana-Pacific Corporation - Roxboro
10475 Boston Road
Roxboro, NC 27574

SIC: 2493 / Reconstituted Wood Products
NAICS: 321219 / Reconstituted Wood Product Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D .0503, .0512, 0515, .0516, .0521, .0524, .0614,
NSPS: Dc
NESHAP: DDDD, QQQQ, ZZZZ, DDDDD
PSD: NA
PSD Avoidance: 02Q .0317
NC Toxics: 02Q .0711
112(r): NA
Other: 02D .1806

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Ross Reed Plant Environmental Manager (336) 503-3166 10475 Boston Road Roxboro, NC 27573	Gary Horne Interim Plant Manager (336) 504-3160 10475 Boston Road Roxboro, NC 27574	Ross Reed Plant Environmental Manager (336) 503-3166 10475 Boston Road Roxboro, NC 27573

Application Data

Application Number: 7300061.20A
Date Received: 09/02/2020
Application Type: Renewal/Modification
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 07760/T24
Existing Permit Issue Date: 12/08/2020
Existing Permit Expiration Date: 05/31/2021

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	6.84	141.26	129.90	116.33	66.38	59.53	28.63 [Methanol (methyl alcohol)]
2019	8.81	135.49	127.85	101.77	64.60	58.89	28.35 [Methanol (methyl alcohol)]
2018	13.06	137.72	133.58	103.40	66.10	61.63	29.57 [Methanol (methyl alcohol)]
2017	9.99	157.48	127.53	137.37	42.93	59.77	28.59 [Methanol (methyl alcohol)]
2016	8.97	146.45	126.39	122.35	40.95	57.91	27.69 [Methanol (methyl alcohol)]

Review Engineer: Eric L. Crump, P.E.

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue: 07760T25
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

Louisiana-Pacific Corporation – Roxboro (hereinafter referred to as Louisiana-Pacific) is a reconstituted wood product manufacturing company located in Roxboro, Person County, North Carolina. The facility currently operates under Title V Permit No. 07760T24 with an expiration date of May 31, 2021. Louisiana-Pacific has applied for renewal of their Title V air quality permit. Renewal application No. 7300061.20A was received on September 2, 2020, or at least six months prior to the expiration date as required by General Condition 3.K of the current permit. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

Through permit application No. 7300061.20A, Louisiana-Pacific included the following changes to the existing permit:

- Addition of two Generac 60 Hz, 13 kilowatt (kW)/17.4 horsepower (hp) liquid propane gas (LPG)-fired air-cooled emergency generators (IS-GEN-1 and IS-GEN-2) for its wastewater system;
- Step 2 of the permit modification for replacement of five existing triple-pass wafer dryers (Nos. D1 through D5, each with a maximum processing capacity of 15.0 oven-dried tons of wafer per hour (ODT/hr)) with single-pass wafer dryers (Nos. D1-A through D5-A, each with a throughput capacity of 17.7 ODT/hr); and
- Updating the insignificant activities list in the permit to refer to tanks IS-WE-1, IS-WE-2, IS-MDI-3, IS-MDI-4, IS-PF-5, and IS-PF-6 as "resin tanks" instead of the specific material stored in the tanks to allow for process flexibility.

In addition, during a teleconference with DAQ, on February 28, 2022, Louisiana-Pacific requested an extension of the deadline in the permit on the source test requirement in order to allow replacement of the media in the regenerative thermal oxidizers (RTOs) and additional tune-ups of the process to be conducted during a shutdown of the entire facility scheduled for July 2022.

2. Facility Description

Louisiana-Pacific's Roxboro plant manufactures oriented strand board (OSB) sheathing for use in wall, roof, and flooring construction. A typical unit of OSB measures 4 × 8 feet, with a board thickness ranging from ¼- inch to $1^{1}/_{8}$-inches. The plant also produces subflooring as well as TechShield®, an OSB product with a radiant barrier used in roofing applications to reduce attic temperatures. Louisiana-Pacific sells OSB to domestic clients including Lowes, Home Depot, and other building supply stores.

The OSB manufacturing process consists of the following steps:

- Tree length logs delivered to the facility are debarked
- Waferizers reduce the debarked logs into thin wafers, which are dried in large dryers
- The dried wafers are blended together with resins and wax
- A heated hydraulic press compresses the wafer-resin-wax blend into boards with the desired thickness
- Finally, the boards are trimmed to specification and packaged for shipment.

The facility typically operates 24 hours per day, seven days per week, 50 weeks per year. The facility usually shuts down operation once every week or two for approximately four hours to perform routine

maintenance on the plant's equipment. Approximately 150 employees work at the plant over a two-shift schedule.

3. Application Chronology

June 30, 2016	Division of Air Quality (DAQ) issues Permit No. 07760T21 to Louisiana-Pacific as a Title V renewal/modification.
December 14, 2016	DAQ receives air permit application No. 7300061.16C from Louisiana-Pacific for a minor modification of their permit to (1) make design changes to the heat exchange media beds in the regenerative thermal oxidizers (RTOs), and (2) reduce the size of the burners associated with three of the RTOs.
June 5, 2017	DAQ receives 502(b)(10) notification form from Louisiana-Pacific to replace two process cyclones (PCYCD-2 and PCYCD-4) with two new identically sized units. The proposed modification is assigned air permit application No. 7300061.17B.
June 13, 2017	DAQ issues response to Louisiana-Pacific, authorizing implementation of the aforementioned 502(b)(10) change.
November 4, 2018	DAQ receives 502(b)(10) notification form from Louisiana-Pacific to replace a process cyclone (PCYCD-5) with a new identically sized unit. In addition, a dust collector will be installed at the blender area to remove fugitive indoor wood dust for fire-prevention and safety purposes. Louisiana-Pacific states the dust collector will not emit regulated pollutants to the atmosphere and should be exempt from air permitting requirements under 15A NCAC 02Q .0102 (g)(14)(a).
November 6, 2018	DAQ issues Applicability Determination Request No. 3338 to Louisiana-Pacific stating no changes to the air permit are required for the replacement of the process cyclone, therefore no permit modification is required. However, pursuant to 15A NCAC 02Q .0102 (b)(1), the 15A NCAC 02Q .0102 exemptions do not apply to "facilities whose potential emissions require a permit pursuant to 15A NCAC 02Q .0500 (Title V Procedures)." The dust collector would, however, be considered an insignificant activity under 15A NCAC 02Q .0503(8).
February 27, 2019	DAQ issues a revision to Applicability Determination Request No. 3338, in reply to Louisiana-Pacific's February 27, 2019 correspondence clarifying that control device PCYCD-1 would be replaced with an equivalent device instead of PCYCD-5.
April 16, 2019	DAQ issues Permit No. 07760T22 to Louisiana-Pacific as a Title V minor modification, implementing the changes requested in permit application Nos. 7300061.16C and 7300061.17B.
May 8, 2019	DAQ receives air permit application No. 7300061.19A from Louisiana-Pacific as a Title V air permit modification to replace five existing triple-pass wafer dryers (D1 through D5, each with a maximum processing capacity of 15.0 oven-dried tons of wafer per hour (ODT/hr)) with single-pass wafer dryers (D1-A through D5-A, each with a throughput capacity of 17.7 ODT/hr).

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September 26, 2019	DAQ issues Permit No. 07760T23 to Louisiana-Pacific as Part One of a 501(b)(2) Title V air permit modification, implementing the replacement of the five existing wafer dryers with larger capacity wafer dryers.
March 23, 2020	DAQ receives notification from Louisiana-Pacific of its intent to replace existing edgesealing spray booth IS-EO-1 with a newer, higher efficiency spray booth. The replacement booth would continue to qualify as an insignificant activity.
April 1, 2020	DAQ issues Permit Applicability Determination No. 3540 to Louisiana-Pacific, concurring that the replacement of the existing edgesealing spray booth IS-EO-1 qualifies as an insignificant activity. No permit application is required at this time.
September 8, 2020	DAQ receives air permit application No. 7300061.20A from Louisiana-Pacific as a Title V permit renewal.
September 11, 2020	DAQ receives air permit application No. 7300061.20B from Louisiana-Pacific as a Title V permit modification to change the permit requirement for emissions testing of the wafer dryer system within 180 days of installation of **each** of the new dryers to within 180 days of installation of **all** the new dryers.
October 6, 2020	S. Parekh, Stationary Source Compliance Branch (SSCB), DAQ, emails G. Patnaik, Permits Division, DAQ, asking for clarification regarding visible emissions when the wet electrostatic precipitators (WESPs) and regenerative thermal oxidizers (RTOs) are bypassed, leaving the wafer drying process to be controlled by cyclones only.
October 8, 2020	S. Parekh, SSCB, DAQ, notifies R. Velthuisen, TRC Companies by email that when WESPs and RTOs are bypassed, emissions from the wafer drying process (controlled by cyclones only) could exceed the major source threshold, and may need continuous CAM monitoring. R. Velthuisen responds, saying she will contact Louisiana-Pacific for additional information on this issue.
October 12, 2020	Exchange of emails between G. Patnaik, Permits Division, DAQ and S. Parekh, SSCB, DAQ. Decision is made to proceed with permit modification (Application No. 7300061.20B), and address the WESP/RTO bypass issue in the permit renewal (Application No. 7300061.20A).
December 8, 2020	DAQ issues Permit No. 07760T24 to Louisiana-Pacific as a Title V modification, implementing the changes requested in permit application Nos. 7300061.20B.
January 19, 2022	DAQ sends email to R. Velthuisen, TRC Companies, regarding questions about the potential need to require continuous monitoring under CAM for the water drying process at Louisiana-Pacific when the WESPs and RTOs are bypassed, leaving the wafer drying process to be controlled by cyclones only.
January 27, 2022	Phone conversation between E. Crump, DAQ and R. Velthuisen, TRC Companies to further discuss CAM issue.
February 17, 2022	R. Velthuisen, TRC Companies, emails response to DAQ, saying the wafer dryer cyclones do not warrant continuous monitoring under CAM when the WESPs and RTOs are bypassed, because the wood flake feed to the dryer automatically stops

	when the emission controls are bypassed, and does not resume until the bypass dampers are closed. The dryer is cleared of flakes after about six minutes, so the emissions during a bypass event are minimal.
February 18, 2022	S. Parekh, SSCB emails E. Crump, DAQ Permits Section, providing additional comments on CAM requirements for the Louisiana-Pacific permit renewal.
February 18, 2022	E. Crump, DAQ emails R. Velthuisen, TRC Companies requesting information regarding the frequency and duration of occasions when exhaust from the dryers bypasses the WESPs and RTOs.
February 28, 2022	Teleconference held with DAQ, Louisiana-Pacific, and TRC Companies present. Louisiana-Pacific requests the deadline in the permit for source testing after installation of all five dryers be extended to allow replacement of the media in the regenerative thermal oxidizers (RTOs) and additional tune-ups of the process to be conducted during a shutdown of the entire facility scheduled for July 2022. DAQ agrees to amend the permit during the current renewal to extend the deadline.
March 7, 2022	R. Velthuisen, TRC Companies emails E. Crump, DAQ, detailing the frequency and duration of occasions when exhaust from the dryers bypasses the WESPs and RTOs.
March 8, 2022	Draft permit and review sent for internal DAQ supervisor and SSCB review.
March 11, 2022	Comments on draft permit and review received from SSCB.
March 22, 2022	Comments on draft permit and review received from DAQ supervisor.
March 31, 2022	DAQ sends draft permit to Louisiana-Pacific and the Raleigh Regional Office (RRO) for review and comment.
April 8, 2022	DAQ receives comments on draft permit from Louisiana-Pacific.
April 12, 2022	DAQ receives comments on draft permit from RRO.
April 19, 2022	DAQ receives official notification from Louisiana-Pacific designating James Waddell as the current responsible official/authorized contact.
May 4, 2022	Final concurrence on addressing comments on draft permit received from R. Velthuisen, TRC Companies.
xxx	Permit renewal public notice published, 30-day public notice and comment period begins, and 45-day U.S. Environmental Protection Agency (EPA) comment period begins.
xxx	30-day public notice and comment period ends.
xxx	45-day EPA comment period ends.

4. Changes to Permit and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes made to the current Louisiana-Pacific permit as a result of this permit renewal (or modification):

Page No.	Section	Description of Changes
Cover and throughout	---	• Updated all dates and permit revision numbers • Changed all citations of 15A NCAC 2D to 15A NCAC 02D • Changed all citations of 15A NCAC 2Q to 15A NCAC 02Q • Removed "§" symbol wherever it occurred throughout permit • Changed "PM10" and "PM-10" wherever they occur to "PM_{10}" • Replaced "Special Condition" with "Section" whenever it occurs before a reference to a permit condition • Changed each instance of "3/8 inch" to "3/8-inch" • Changed "regenerative thermal oxidizer", "oxidizer" and "thermal oxidizer" to "RTO" after the first occurrence in the permit language • Removed unnecessary hyphens and periods from permit section citations in the permit language • Removed each mention of five triple pass direct fired wafer dryers (ID Nos. D-1 through D-5), which have since been replaced by five single pass direct fired wafer dryers (ID Nos. D-1A through D-5A)
Cover page	---	• Added NAICS code for facility • Added due date for renewal of permit
2	Table of Contents	• Changed Section 3 from "General Conditions" to "Insignificant Activities per 15A NCAC 02Q .0503(8)" • Added Section 4, General Conditions
3	List of Acronyms	Moved list from end of permit to page following Table of Contents
Insignificant Activities List	Attachment	Moved list to Section 3 of the permit
5	1	Removed CYC5 from description of source ID No. CP-005, and added it as an additional control device for source CP-005 in the control device ID No. and description columns
6	2.1 A	Updated summary table of limits and standards to current format
7	2.1 A.1 2.1 A.1.c	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 Defined the acronym RTO to mean "regenerative thermal oxidizer"
8	2.1 A.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0516
9	2.1 A.3.a 2.1 A.3.b, c, e	Changed "TOH" to "thermal oil heaters"; deleted NCAC citation in brackets Updated section to reflect the most current stipulations for 15A NCAC 02D .0521

Page No.	Section	Description of Changes
10	2.1 A.4.b, c	Added the appropriate references from 40 CFR 60 Subpart Dc
	2.1 A.4.f	Deleted the phrase "or notification requirements to the EPA"
	2.1 A.4.f.ii	Added reference to Sections 2.1 A.4.d through f
	2.1 A.5.b	Modified to reference written plan requirements listed in 15A NCAC 02D .0535(d)
	2.1 A.5.b.iv	Changed facsimile notification requirement to email requirement
11	2.1 A.6	• Removed "a." preceding sentence in this section • Deleted the word "alternate"
	2.1 A.7	Updated section to reflect the most current stipulations for 15A NCAC 02D .0503
	2.1 A.8	Updated section to reflect the most current stipulations for 15A NCAC 02D .0503
	2.1 A.9	This section is no longer "Reserved"; it now contains 02D .0524 (NSPS Dc) requirements for alternate operating scenario (recordkeeping and reporting requirements)
12	2.1 A.10	Updated section to reflect the most current stipulations for 15A NCAC 02D .1111, 40 CFR Part 63, Subpart DDDDD
14	2.1 B	Updated summary table of limits and standards to current format
	2.1 B.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0512
15	2.1 B.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0516
	2.1 B.3	Updated section to reflect the most current stipulations for 15A NCAC 0D2 .0521
16	2.1 C	• Revised listing of wood product forming and finishing operations so that each group process is listed with its associated control devices • Updated summary table of limits and standards to current format • Added control device CYC5 to list of controls for "Mat reject and flying saw system . . ."
17	2.1 C.1.b	Added control device CYC5 to list of cyclones
	2.1 C.1.e	Updated section to reflect the most current stipulations for 15A NCAC 02D .0512
	2.1 C.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
18	2.1 D	Updated summary table of limits and standards to current format

Page No.	Section	Description of Changes
19	2.1 D.1.b	Combined subparagraph i into paragraph b
	2.1 D.1.d	Updated section to reflect the most current stipulations for 15A NCAC 02D .0512
	2.1 D.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
	2.1 E	Updated summary table of limits and standards to current format
20	2.1 E.1, 2	Updated sections to reflect the most current stipulations for 15A NCAC 02 .0516 and .0521
	2.1 E.3	Updated section to reflect the most current stipulation for 15A NCAC 02D .1111, 40 CFR Part 63, Subpart ZZZZ
21	2.2 A	Updated summary table of limits and standards to current format
	2.2 A.1	• Updated section to reflect the most current stipulations for 15A NCAC 02 .1100 • Changed “elemental AS” to “elemental As” in toxics limits table
22	2.2 A.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0711
23	2.2 A.3	• Deleted “Requirement: Odor Requirements” from section heading • Removed subparagraph “a.” but retained permit stipulation
	2.2 B	Updated summary table of limits and standards to current format
24	2.2 B.1.a	Deleted “this regulation”; inserted “each” after the words “250 tons”
	2.2 B.1.c	Changed “thermal oxidizers to “RTOs”
	2.2 B.1.c.i	• Changed “oxidizers” to “RTO”. • Revised to require next test for the RTOs to be conducted by September 15, 2022. • Added allowance for DAQ to approve a test date differing from that required by the permit.
	2.2 B.1.e.i	• Defined the acronym “MSF” in definition of the variable P_{ai} to mean “thousand square feet” • Edited definitions of the variables T_i and P_t for clarity
	2.2 B.1.e.iv	Deleted this paragraph (requirement to not operate more than five dryers simultaneously)
26-27	Table 2.2-1	• Spelled out LP (Louisiana-Pacific), Tech (Technical), and first occurrence of SDS (safety data sheet) • Acronym “SDA” corrected to “Safety Data Sheet” • For edgeseal operations printing operations, and TechShield® process, changed basis of VOC emission factors to “Material SDS or manufacturers formulation data provided with each shipment of each ingredient”
29-30	Table 2.2-3	Spelled out LP (Louisiana-Pacific),
31	2.2 B.1.k.i	Added definition of the variable $E_{CO(Misc)}$

Page No.	Section	Description of Changes
33	2.2 B.1.l.i	Added definition of the variable $E_{NOx(Misc)}$
34	2.2 B.1.o.iv	Added "and the SDS or manufacturers formulation data provided with each shipment of each ingredient used to calculate VOC emissions"
35	2.2 B.1.q 2.2 B.1.r 2.2 B.1.r.ii	Eliminated subparagraph i; retained permit language in paragraph q Created new paragraph r; relocated former subparagraphs q.ii through q.v to paragraph r as subparagraphs r.i through r.iv • Changed deadline for dryer system testing from "within 180 days of installation" to "September 15, 2022, unless another date is approved by NCDAQ" • Changed "without" in second sentence to "with"
36	2.2 B.1.s, t 2.2 C	Redesignated last two subparagraphs as new paragraphs s and t Updated section to reflect the most current format and stipulations for 15A NCAC 02D .0614
38	2.2 C.2.c.iii	Added control device CYC5 to list of cyclones
39	2.2 D	Updated section to reflect the most current format and stipulations for 15A NCAC 02D .1111, including CEDRI reporting requirements
41	2.2 D.1.o.iii-iv 2.2 D.1.q	Changed "EPA Administrator" to "NCDAQ" Added CEDRI reporting requirements
42	2.2 E.1	Updated section to reflect the most current format and stipulations for 15A NCAC 02D .1111
46	3	Moved list of insignificant activities to Section 2.3, which includes the following changes: • Redesignating/renumbering five former organic liquid storage tanks as resin storage tanks (new ID Nos. IS-RESINTK-1 through IS-RESINTK-6) • Added new emergency generators ID Nos. IS-GEN-1 and IS-GEN-2
48-56	4	Updated General Conditions to Version 6.0 dated January 7, 2022

The following changes have been made to the TVEE:

Former Device ID No.	Former TVEE Description	New Device ID No.	New TVEE Description
IS-WE-1	one volatile organic liquid storage tank (12,000 gallon capacity)	IS-RESINTK-1	one resin storage tank (12,000 gallon capacity)
IS-WE-2	one volatile organic liquid storage tank (12,000 gallon capacity)	IS-RESINTK-2	one resin storage tank (12,000 gallon capacity)
IS-MDI-3	one volatile organic liquid or soybean oil storage tank (30,000 gallon capacity)	IS-RESINTK-3	one resin storage tank (30,000 gallon capacity)
IS-MDI-4	one volatile organic liquid storage tank (30,000 gallon capacity)	IS-RESINTK-4	one resin storage tank (30,000 gallon capacity)
IS-PF-5	one volatile organic liquid storage tank (15,000 gallon capacity)	IS-RESINTK-5	one resin storage tank (15,000 gallon capacity)

IS-PF-6	one volatile organic liquid storage tank (15,000 gallon capacity)	IS-RESINTK-6	one resin storage tank (15,000 gallon capacity)

The following sources have been added to the TVEE:

- ID Nos. IS-GEN-1 and IS-GEN-2, two liquid propane gas-fired emergency generators (17.4 horsepower each)

The following control device has been added to the TVEE:

- ID No. CYC5, one bypass cyclone (144 inches in diameter)

5. Description of Changes and Estimated Emissions

The following changes are being made to the Louisiana-Pacific permit.

- Addition of two Generac 60 Hz, 13 kilowatt (kW)/17.4 horsepower (hp) liquid propane gas (LPG)-fired air-cooled emergency generators (IS-GEN-1 and IS-GEN-2) for its wastewater system. Both of these emergency generators can be classified as new stationary reciprocating internal combustion engines (RICE) under 40 CFR Subpart ZZZZ (see 40 CFR 63.6590(a)(2)(ii)). As they are spark engines with less than 500 brake horsepower located at a major HAP source, these generators would be required to comply with Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart JJJJ (see 40 CFR 63.6590(c)). However, both IS-GEN-1 and IS-GEN-2 can be classified as insignificant activities under 15A NCAC 02Q .0503(8) if the emissions from each generator would not violate any applicable emissions standard, the potential uncontrolled criteria pollutant emissions from each are no more than five tons per year and the potential uncontrolled HAP emissions from each are below 1000 pounds per year. Because these generators are relatively small, are fired with LPG, and are limited in usage under their designation as emergency use generators, their potential emissions[1] should not exceed the standard for insignificant activities under 02Q .0503(8). Compliance is expected.

- Step 2 of permit modification: Replacement of five existing triple-pass wafer dryers (Nos. D1 through D5, each with a maximum processing capacity of 15.0 oven-dried tons of wafer per hour (ODT/hr)) with five single-pass wafer dryers (Nos. D1-A through D5-A, each with a throughput capacity of 17.7 ODT/hr). As explained in the permit review for Permit Application No. 7300061.19A (G. Patnaik, Permit No. 07760T23, 9/26/2019), Louisiana Pacific requested this change as a 02Q .0501(b)(2) significant modification and as per 15A NCAC 02Q .0501(b)(2) "a construction and operation permit following the procedures set forth in 15A NCAC 02Q .0504 and filing a complete application within 12 months after commencing operation to modify the construction and operation permit to meet the requirements of this Section." Thus, Application No. 7300061.19A was processed as a significant "two-step" modification per 15A NCAC 02Q .0501 (b)(2) (Part I). The current application (7300061.20A) represents Part II of the modification.

  Upon installation of each of the new dryers (D-1A through D-5A), Louisiana Pacific is required to perform testing within 180 days of installation to determine emissions factors for the emissions of carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM), PM_{10} and volatile organic compounds (VOC). The testing shall conform to protocols approved by the Stationary

[1] Per EPA policy memo (J. Seitz, EPA/OAQPS, 9/06/1995), 500 hours of operation per year is assumed as the basis for determining potential to emit for an emergency generator.

Source Compliance Branch (SSCB) of NCDAQ. Once SSCB approves the test results, the new emission factors based on the test results shall be incorporated into the permit through a permit modification application submitted by Louisiana-Pacific within 90 days of the test result approval by SSCB.[2]

- Updating the insignificant activities list to refer to tanks IS-WE-1, IS-WE-2, IS-MDI-3, IS-MDI-4, IS-PF-5, and IS-PF-6 as "resin tanks" instead of the specific material stored in the tanks. This change has been made to better reflect how these tanks are used, allowing Louisiana-Pacific to have more operational flexibility. Changing the descriptions of these tanks and the tank ID numbers (IS-RESINTK-1 through IS-RESINTK-6) will have no effect on the potential emissions from these tanks, as the contents of the tanks are not expected to result in an emissions increase that would violate any applicable emissions standard, exceed five tons per year of potential uncontrolled criteria pollutant emissions, or 1000 pounds per year of potential uncontrolled HAP emissions. Continued compliance is expected.

- Addition of control device ID No. CYC5. This control device, a bypass cyclone (144 inches in diameter) had been included in the equipment table (Section 1 of the permit) as part of source ID No. CP-005, the mat reject and flying saw system. While reviewing the draft renewal permit, Louisiana-Pacific requested that this cyclone be listed in the equipment table as an additional control device. This correction to the permit is being made in this renewal, along with related additions of cyclone CYC5 to Section 2.2 C of the permit (see the table of changes in Section 4 of this review), and has no impact on emissions at the facility. Continued compliance is expected.

- Extension of the deadline for performing source testing on the dryer system. The current Louisiana-Pacific permit (No. 07760T24) includes two requirements for source testing after replacement of five existing triple-pass direct fired dryers (D-1 through D-5) with five single-pass direct fired wafer dryers (D-1A through D-5A):
  - *Condition 2.2 B.1.q.iii* – "The Permittee shall perform testing of the dryer system within 180 days of installation of all of the new dryers **(ID Nos. D-1A through D-5A)** with protocols approved by NCDAQ Stationary Source Compliance Branch (SSCB)."
  - *Condition 2.2 B.1.c.i* – "Periodic testing of the oxidizers shall be conducted within 60 months after the previous test. If the results of this test are above the limits in Section 2.2 B.1.a above for VOC emissions, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530."

  As written, neither of these permit conditions provide any basis for changing the testing deadlines. In addition, the conditions as written would require Louisiana-Pacific to conduct two source tests within a relatively short time frame for minimal benefit.

  Louisiana-Pacific has planned a month-long plantwide shutdown for July 2022. During the shutdown, Louisiana-Pacific intends to replace the media in the facility's propane/natural gas-fired RTOs (RTO-4 through RTO-6), and conduct additional tune-ups of the dryers and emission controls. This work would allow the facility to operate all five dryers with the three RTOs, which is not currently possible.

[2] During the application process to change the emissions factors in the permit, the DAQ review engineer shall reevaluate compliance with 02D .0515 and 02D .0521, since the hourly emissions factors of PM emissions may change, and possibly require compliance with 02D .0614 "Compliance Assurance Monitoring."

Since the media replacement and tune-ups would help to ensure compliance with permit requirements, and because a single source test after the plant shutdown is sufficient to determine compliance with those requirements, DAQ believes it is sensible and appropriate to revise the permit to extend the deadline for source testing, and to allow a single source test instead of two source tests which would be conducted within a short time frame. The above permit conditions will be revised in the permit renewal as follows:

- *Condition 2.2 B.1.r.iii* – "The Permittee shall perform testing of the dryer system **(ID Nos. D-1A through D-5A)** by September 15, 2022, unless another date is approved by NCDAQ, with protocols approved by NCDAQ Stationary Source Compliance Branch (SSCB)."
- *Condition 2.2 B.1.c.i* – "The next test for the oxidizers shall be conducted by September 15, 2022. Periodic testing of the oxidizers shall be conducted within 60 months after the previous test, unless another date is approved by NCDAQ. If the results of this test are above the limits in Section 2.2 B.1.a above for VOC emissions, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530."

This change to the permit will not result in an increase in emissions at the facility, and allows Louisiana-Pacific to perform necessary maintenance and testing to ensure compliance with permit requirements. Continued compliance is expected.

6. Regulatory Review

Louisiana-Pacific is subject to the following state regulations, in addition to the requirements in the General Conditions:

02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers. This rule applies to particulate matter (PM) emissions from the combustion of fuel in indirect heat exchangers, such as boilers or oil heaters, that are discharged from any stack or chimney into the atmosphere. The regulation provides the following equation for determining the allowable emissions limit as a function of maximum heat input:

$$E = 1.090 \times Q^{-0.2594}$$

Where:

E = allowable emissions limit for PM in pounds per million Btu (lb/MMBtu); and

Q = maximum heat input in million Btu per hour (MMBtu/hr). The maximum heat input is the total heat content of all fuels and is the sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted when determining the allowable emission limit for each fuel burning indirect heat exchanger.

Based on the Q determined for Louisiana-Pacific at the time thermal oil heaters (TOH-1 and TOH-2) were installed, particulate emissions from the thermal oil heaters (TOH-1 and TOH-2) shall not exceed 0.35 lb/MMBtu heat input when these heaters are operated under the alternative operating scenario (see the discussion under 02Q .0508(j), Alternative Operating Scenarios in this section of the review). No monitoring, recordkeeping, or reporting is required for particulate emissions when these sources are fired with natural gas, as particulate emissions are low when using this fuel. This permit renewal does not affect this status. Continued compliance is expected.

02D .0512, Particulates from Wood Products Finishing Plants. This rule prohibits the discharge of PM caused by the working, sanding, or finishing of wood from any stack, vent, or building into the atmosphere without providing ductwork and collectors ". . . that are properly designed and adequate to collect particulate to the maximum extent practicable . . . In no case shall the ambient air quality standards be exceeded beyond the property line." The wood processing operations listed in the following table are subject to this rule, and are required to be controlled by adequate ductwork and properly designed collectors as indicated. To ensure compliance, Louisiana-Pacific must perform inspections and maintenance as recommended by the manufacturer, but at a minimum, an annual inspection of the associated ductwork is required, noting its structural integrity.

Emission Source (ID No.)		**Control Device**
Two OSB press enclosure vents (PV-1 and PV-2) from one totally enclosed hot press board processing operation		One regenerative thermal oxidizer (RTO-3)
Wood Product Forming and Finishing Operations Consisting of Several Group Processes:	Sawtrim and finishing line clean-up operation (CP-001)	One bagfilter (B-1) and/or one bypass cyclone (CYC1)
	Blender and forming bin aspiration systems (CP-002)	One bagfilter (B-2)
	Saw trim recovery (screen) cyclone (CYC9)	NA - exhausts to fuel prep system (CP-003)
	Raw fuel bin transfer and loading system (CP-003, and CP-004)	One bagfilter (B-3) and/or one bypass cyclone (CYC3)
	Mat reject and flying saw system with bypass cyclone (CP-005 and CYC5)	One bagfilter (B-5) and/or either bypass wet cyclone (CYC5-2); or bypass dry cyclone (CYC5-1)
	Tongue and groove and sanderdust aspiration system (CP-006)	One bagfilter (B-6) and/or one bypass cyclone (CYC6)
	Sanderdust bin transfer and loading system (CP-007)	One bagfilter (B-7)
	Metering bin transfer and loading system (FUELPREP)	Seven bagfilters (B-1, B-2, B-3, and B-5 through B-8) and six bypass cyclones (CYC1, CYC3, CYC5-1, CYC5-2, CYC6, and CYC8)
TechShield® Coating Operation (TS-1) consisting of:	Adhesive roll coating operation and associated sheathing application	NA
	Cleaning operations	NA

Inspection and maintenance activities must be recorded in a logbook and made available upon request. Semiannual reporting of monitoring and recordkeeping activities is required. This permit renewal does not affect this status. Continued compliance is expected.

02D .0515: Particulates from Miscellaneous Industrial Processes. This rule addresses emissions of PM from stacks, vents, or outlets for any industrial process for which no other emission control standards apply. For such processes, the allowable emission rates shall not exceed the level calculated using one of the following equations, as appropriate:

$E = 4.10(P)^{-0.67}$ for process rates less than or equal to 30 tons per hour (ton/hr)

$E = 55.0(P)^{0.11} - 40$ for process rates greater than 30 ton/hr

Where:

E = allowable emissions limit for PM in pounds per hour (lb/hr), and
P = process rate in ton/hr (i.e., the total weight per hour of all materials introduced into a specific process that may cause any emission of PM. Liquid and gaseous fuels and combustion air are not included in the process weight).

The sources which collectively comprise the wafer drying process at Louisiana-Pacific are subject to this rule: the bark burner (BARK1), the two thermal oil heaters (TOH-1 and TOH-2), the five existing wafer dryers (D-1 through D-5) and the five new wafer dryers (D-1A through D-5A). Emissions are required to be controlled using five cyclones (PCYCD-1 through PCYD-5), two wet electrostatic precipitators (or WESPs—WESP-1 and WESP-2) and the three regenerative thermal oxidizers (or RTOs—RTO-4 through RTO-6).

The permit calls for extensive monitoring and recordkeeping of the control devices. Louisiana-Pacific must perform inspections and maintenance on the ductwork and control devices as recommended by the manufacturer, which shall at a minimum consist of monthly external visual inspections of the system ductwork and material collection units for leaks. For the two WESPs, there shall be at a minimum the following:

- a weekly external visual inspection of critical components of the wet electrostatic precipitator such as voltmeters, quench inlet temperature gauges, outlet temperature gauges, nozzles, pumps, and piping;
- a weekly check for any equipment that does not generate an alarm in the turned-off state (to ensure it is switched on);
- a check for signs of plugging and buildup during planned maintenance shutdown periods for the WESP; and
- a monthly external visual inspection of the system ductwork and material collection unit for leaks and corrosion.

In addition, once during each shift Louisiana-Pacific is required to monitor and record the secondary voltage, quench inlet gas temperature and exit gas temperature of the WESPs in a logbook, and keep the monitoring devices properly calibrated, operated, and maintained using procedures that take into account manufacturer's specifications. Each week, Louisiana-Pacific is required to review the gas temperatures and voltage readings. If they are observed to be outside the normal range, the WESPs must be inspected for malfunctions and repair, as necessary, in accordance to manufacturer's inspection and maintenance recommendations. Semiannual reporting of monitoring and recordkeeping activities is required. This permit renewal does not affect this status. Continued compliance is expected.

02D .0516, Sulfur Dioxide Emissions from Combustion Sources. Under this regulation, emissions of sulfur dioxide (SO_2) from any source of combustion discharged from any vent, stack, or chimney shall not exceed 2.3 pounds of sulfur dioxide per MMBtu input. The following sources at Louisiana-Pacific are subject to this rule:

- The wafer drying process, comprised of the bark burner (BARK1), the two thermal oil heaters (TOH-1 and TOH-2), the five existing wafer dryers (D-1 through D-5), the five new wafer dryers (D-1A through D-5A). Emissions from this process are controlled by five

cyclones (PCYCD-1 through PCYD-5), two WESPs (WESP-1 and WESP-2) and three RTOs (RTO-4 through RTO-6).
- Two OSB press enclosure vents (PV-1 and PV-2) from one totally enclosed hot press board processing operation controlled by one RTO (RTO-3)
- Diesel-fired emergency generator (ENG-1)

No monitoring, recordkeeping or reporting is required for SO_2 emissions from these sources. In general, these sources burn fuel with low sulfur content—either natural gas or low sulfur diesel fuel. The bark burner fires wood fuel and recycled resinated wood fuel, as do the thermal oil heaters when not fired with natural gas; the burner and heaters are controlled with cyclones, WESPs, and RTO. All of these sources, with the exception of the emergency generator are vented to an RTO, so SO_2 emissions are well controlled. This permit renewal does not affect this status. Continued compliance is expected.

02D .0521, Control of Visible Emissions. This rule establishes opacity limits for visible emissions generated by fuel burning operations and industrial processes (except during startups, shutdowns, and malfunctions approved according to procedures in 15A NCAC 02D .0535). The regulation establishes opacity limits for visible emissions from sources based on the date the sources were manufactured. The following sources at Louisiana-Pacific are subject to this rule:

- the bark burner (BARK1),
- the two thermal oil heaters (TOH-1 and TOH-2) when operating under the AOS (exhausting through their stacks while firing natural gas only),
- the five existing wafer dryers (D-1 through D-5) and the five new wafer dryers (D-1A through D-5A)
- the two OSB press enclosure vents (PV-1 and PV-2) from one totally enclosed hot press board processing operation,
- the wood product forming and finishing operation sources (CP-001 through CP-007, CYC5, CYC9, and FUELPREP), and
- the TechShield® Coating Operation (TS-1), including the adhesive roll coating operation, sheathing application, and cleaning operations.

Because the sources listed were manufactured after July 1, 1971, 02D .0521 limits them to 20 percent opacity averaged over a six-minute period. The six-minute averaging periods may exceed 20 percent not more than once in any hour, and not more than four times in any 24-hour period. In no event shall the six-minute average for these sources exceed 87 percent opacity.

Monitoring requirements for the sources are as follows:

Source (ID No.)	**Monitoring requirements in the permit**
New wafer dryers (D-1A through D-5A) OSB press enclosure vents **(**PV-1, PV-2) Wood product forming and finishing operation sources (CP-001 through CP-007, CYC5, CYC9, and FUEL PREP)	Once-a-month observation of each source for any visible emissions above normal; corrective action as appropriate to ensure compliance
Thermal oil heaters (TOH-1, TOH-2) Emergency generator (ENG-1)	No monitoring, recordkeeping, or reporting required when firing natural gas (TOH-1 and TOH-2) or diesel fuel (ENG-1)
TechShield® Coating Operation (TS-1)	Monitoring requirements for compliance with 02D. 0512 (adequate ductwork and properly

Source (ID No.)	Monitoring requirements in the permit
	designed collectors, inspection and maintenance as recommended by the manufacturer)

The monitoring results for these sources are required to be recorded in a logbook on site and made available upon request. Semiannual reporting is required. This permit renewal does not affect this status. Continued compliance is expected.

02D .0524, New Source Performance Standards (40 CFR 60, Subpart Dc). This rule requires that sources subject to new source performance standards (NSPS) promulgated in 40 CFR Part 60 shall comply with emission standards, and any requirements for monitoring, reporting, maintenance, notification, recordkeeping requirements, testing, and procedural provisions rather than with any otherwise applicable rule in Section .0500, Emission Control Standards that would conflict with any NSPS. The thermal oil heaters (TOH-1 and TOH-2) are subject to this rule. This is discussed in further detail in Section 8 of this review.

02D .0614: Compliance Assurance Monitoring (CAM). This rule implements the state CAM rule requirements in accordance with 40 CFR 64 for those sources at Louisiana-Pacific that are not exempted under 40 CFR 64.2. This is discussed in further detail in Section 11 of this review.

02D .1100, Control of Toxic Air Pollutants. The rules in this section of 15A NCAC 02D were established for the control of toxic air pollutants to protect human health. They are discussed in further detail in Section 12 of this review.

02D .1111, Maximum Achievable Control Technology (MACT). Louisiana-Pacific is subject to several MACT standards, including 40 CFR 63, Subparts DDDD, QQQQ, ZZZZ, and DDDDD. These standards are discussed in detail in Section 7 of this review.

02D .1806, Control and Prohibition of Odorous Emissions. This regulation provides for the control and prohibition of objectionable odorous emissions. applies facility-wide and is state-enforceable only. This rule requires Louisiana-Pacific to implement management practices or install and operate odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable odors beyond the facility's boundary. This permit renewal does not affect this status. Continued compliance is expected.

02Q .0711, Emission Rates Requiring a Permit. See Section 11 of this review.

02Q .0317, Avoidance Conditions. This rule allows permit applicants to request that terms and conditions be placed in that facility's permit to avoid the applicability of certain Federal air pollution control requirements. The Louisiana-Pacific Permit contains avoidance conditions for the following:

- Prevention of Significant Deterioration (02D .0530) – see Section 9 of this review.
- Compliance Assurance Monitoring (02D .0614(b)(1)(E)) – see Section 11 of this review.

02Q .0508(j), Alternative Operating Scenarios. This rule allows permits to specify pertinent terms and conditions for reasonably anticipated operating scenarios identified by the applicant in their permit application. Louisiana-Pacific has identified two possible operating scenarios for the thermal oil heaters (TOH-1 and TOH-2):

- Primary operating scenario (POS): under this scenario, the thermal oil heaters burn wood-related fuels, with the exhaust directed to the bark burner or wafer dryers.

- Alternative operating scenario (AOS): under this scenario, the thermal oil heaters fire natural gas only and exhaust directly through exhaust stacks.

Under the POS, PM emissions are subject to regulation under 02D .0524 (40 CFR 60, Subpart Dc); the requirements are discussed in Section 8 of this review. PM emission limitations for the oil heaters under the AOS were discussed earlier in this section of the review under 02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers.

The permit has been updated to reflect the most current stipulations for all applicable regulations.

7. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Maximum and/or Generally Achievable Control Technology (MACT/GACT)

Louisiana-Pacific is subject to the following MACT standards.

40 CFR 63 Subpart DDDD, National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. Subpart DDDD establishes national compliance options, operating requirements, and work practice requirements for HAP emitted from plywood and composite wood products manufacturing facilities. The seven process units that make up the OSB manufacturing process at Louisiana-Pacific are subject to this rule. They include:

- Five wafer (triple pass green rotary) dryers (D-1 through D-5) heated by exhaust from one bark burner (BARK1) and thermal oil heaters (TOH-1 and TOH-2) controlled by three propane/natural gas-fired regenerative thermal oxidizers (RTO-3 through RTO-6)
- Two OSB press enclosure vents (ID Nos. PV-1 and PV-2) from one totally enclosed hot press board processing operation heated indirectly by thermal oil heaters (ID Nos. TOH-1 and TOH-2) –controlled by one propane/natural gas-fired regenerative thermal oxidizer (ID No. RTO-3)
- Group 1 miscellaneous coating operation - Edgeseal operation (ID No. I-EO-1), Printing operation (ID No. IS-PO-1), Nail line marking (ID No. IS-N-1), White stencil painting (ID No. IS-SP-1), Paint spray booth (ID No. IS-C-1), and mark-out system (ID No. I-MO).

The sources listed above are subject to the following requirements under Subpart DDDD:

Operational Requirements

- Compliance with the compliance options and operating requirements described in Tables 1A, 1B and 2 to 40 CFR 63, Subpart DDDD and in paragraph 40 CFR 63.2240 (c) by using the compliance options listed in paragraphs (a), (b), and (c) of 40 CFR 63.2240 for each process unit listed in Tables 1A and 1B of 40 CFR 63, Subpart DDDD and defined in 40 CFR 63.2292. [40 CFR 63.2240]
- Compliance with the compliance options, operating requirements, and the work practice requirements of Subpart DDDD at all times, except during periods of process unit or control device startup, shutdown, and malfunction; prior to the process unit initial startup. Startup and shutdown periods must not exceed the minimum amount of time necessary for these events. [40 CFR 63.2250]
- Operation of the reconstituted wood product press in an enclosure that meets the definition of a wood products enclosure in 40 CFR 63.2292, or measure the capture efficiency of the capture device for the press, according to the provisions in 40 CFR 63.2267.
- Operation and maintenance of the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(e)(1)(i). [40 CFR 63.2250(b)]

- Develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR 63.6(e)(3). [40 CFR 63.2250(c)]
- To the extent practical, scheduling startup and shutdown of emission control systems during times when process equipment is also shut down. [40 CFR 63.2251(e)]
- Meeting the work practice requirement in Table 3 to 40 CFR 63, Subpart DDDD per 40 CFR 63.2241, as applicable. [40 CFR 63.2241]

Monitoring and Continuous Compliance Requirements:

- install, operate, and maintain each monitoring device or system according to 40 CFR 63.2269.
- monitor and collect data according to 40 CFR 63.2270.
- demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements in 40 CFR 63.2240 and 63.2241 that apply according to the methods specified in Tables 7 and 8 to 40 CFR 63, Subpart DDDD according to 40 CFR 63.2271.

Recordkeeping Requirements

- keep the records listed in 40 CFR 63.2282(a).
- keep the records required in Tables 7 and 8 to 40 CFR 63 Subpart DDDD to show continuous compliance with each compliance option, operating requirement, and work practice requirement that applies. [40CFR 63.2282(b)]
- Keep all records in accordance to 40 CFR 63.2282(c) through 63.2282(e) that apply.
- maintain records in a form suitable and readily available for expeditious review as specified in 40 CFR 63.10(b)(1). [40 CFR 63.2283(a)]
- Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.2283(b)]
- Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The Permittee can keep the records offsite for the remaining 3 years. [40 CFR 63.2283(c)]

Semiannual reporting is required. As a result of changes to the reporting requirements in Subpart DDDD (see 85 FR 49456, August 13, 2020), the revised permit includes requirements for submitting semiannual reports electronically using the U.S. Environmental Protection Agency's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The electronic reporting is required in the first full reporting period after the report template for Subpart DDDD has been available on the CEDRI website for one year.

Other than the electronic reporting requirement, this permit renewal does not affect this status of the Louisiana-Pacific facility with regard to this NESHAP. Continued compliance is expected.

40 CFR 63 Subpart QQQQ, National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products. Subpart QQQQ establishes national emission standards HAP emitted from wood building products surface coating sources, along with requirements to demonstrate initial and continuous compliance with the emission limitations. The TechShield® Coating Operation (TS-1) at Louisiana-Pacific, consisting of an adhesive roll coating operation with associated foil application and cleaning operations, is subject to Subpart QQQQ, along with the mark-out system at the TechShield® line (I-MO).

The mark-out system (I-MO) has been classified as an insignificant activity under 15A NCAC 02Q .0503(8) because its emissions would not violate any applicable emissions standard, its potential uncontrolled criteria pollutant emissions are no more than five tons per year and its potential uncontrolled HAP emissions are below 1000 pounds per year. For this reason, I-MO is not subject to any permit conditions. Continued compliance is expected.

Under the compliance material option of Subpart QQQQ, Louisiana-Pacific meets the emission limits of the rule by demonstrating that the organic hazardous air pollutant (HAP) content of any coating used in the coating operation does not exceed 0.00 pounds of HAP per gallon of solids, and by ensuring the thinners and cleaning materials used do not contain organic HAP. The rule specifies specific procedures for determining the organic HAP content of the coatings, thinners, and cleaning materials used. Because Louisiana-Pacific is using the compliant material option for compliance with Subpart QQQQ, they do not need emission controls for the TechShield® Coating Operation; nor do they need to implement work practice standards. They are required to maintain current copies of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner, and cleaning material and the volume fraction of coating solids for each coating. They must also keep records of:

- the name and volume of each coating, thinner, and cleaning material used during each compliance period,
- the mass fraction of organic HAP for each coating, thinner, and cleaning material used during each compliance period, if applicable;
- the volume fraction of coating solids for each coating used during each compliance period, if applicable; and
- The date, time, and duration of each deviation from the standard.

Semiannual reporting is required. This permit renewal does not affect this status. Continued compliance is expected.

40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Subpart ZZZZ establishes national emission limitations and operating limitations for HAP emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. The diesel-fired 1,332 hp emergency generator (ENG-1) and the 275 brake horsepower diesel fire pump (IS-DF-1) at Louisiana-Pacific are subject to this standard.

The diesel fire pump (IS-DF-1), for the same reasons as the mark-out system discussed above (I-MO) has been classified as an insignificant activity under 15A NCAC 02Q .0503(8), and is not subject to any permit conditions. Continued compliance is expected. And since the diesel-fired emergency generator (ENG-1) is an existing emergency RICE unit that was onsite prior to December 19, 2002 (see 40 CFR 63,6590(a)(1)(i)), it does not have to meet the requirements of Subpart ZZZZ (see 40 CFR 63.6590(b)(3)). This permit renewal does not affect this status. Continued compliance is expected.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. Subpart DDDDD establishes national emission limitations and work practice standards for HAP emitted from industrial, commercial, and institutional boilers and process heaters located at major HAP sources. The two wood fuel/recycled resinated wood fuel/natural gas-fired thermal oil heaters (TOH-1 and

TOH-2) at Louisiana-Pacific are subject to this rule. The oil heaters must undergo an annual tune-up, and be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. Louisiana-Pacific is required to maintain copies of notifications and reports, along with records of measurements of oxygen and carbon monoxide in the effluent stream taken during tune-ups, corrective actions taken, and the type and amounts of fuel used. Annual compliance reports must be submitted to DAQ. This permit renewal does not affect this status. Continued compliance is expected.

8. New Source Performance Standards (NSPS)

The thermal oil heaters (TOH-1 and TOH-2) when operating under their Primary Operating Scenario (POS) are subject to 40 CFR Part 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Subpart Dc generally applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 2.9 to 29 megawatts per hour (MW/hr) (10 to 100 MMBtu/hr). Under Subpart Dc, the oil heaters have the following emission limitations:

- PM shall not exceed 0.10 lb/MMBtu heat input.
- Visible emissions shall not exceed 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.
- Pursuant to 40 CFR Part 60.43c(d), the PM and opacity standards shall apply at all times except during periods of start-up, shutdown, and malfunction.

Louisiana-Pacific is required to use a continuous opacity monitor system (COMS) to monitor and record opacity, and to calibrate, maintain, test, and operate the COMS in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." Records of COMS measurements shall be maintained on-site in written or electronic format and made available to DAQ personnel upon request. Semiannual reporting is required. This permit renewal does not affect this status. Continued compliance is expected.

9. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

Louisiana-Pacific is not one of the 28 source categories listed in 40 CFR § 51.166(b)(1) who are major PSD sources if they exceed 100 tpy for any of the regulated NSR pollutants; so for PSD purposes the applicable threshold is 250 tpy for all regulated NSR pollutants, except for greenhouse gases (GHGs). Louisiana-Pacific is an existing major source under Title V and a minor source under PSD. Person County, where the Louisiana-Pacific facility is located, has been triggered for PSD increment tracking for PM_{10} and SO_2. However, since there are no increases in emissions resulting from this permit renewal/modification, this renewal with modification will not change the facility's classification for either.

In order to avoid applicability of the state PSD regulation, 15A NCAC 02D .0530(g), Louisiana-Pacific has accepted avoidance conditions under 15A NCAC 02Q .0317 in their air permit. The conditions are summarized below.

- Facility-wide emission sources are required to emit less than 250 tons of carbon monoxide (CO), nitrogen oxides (NOx), PM, PM_{10}, and volatile organic compounds (VOC) per consecutive 12-month period. The permit specifies formulas and emission factors to be used in calculating the CO, NOx, PM, PM_{10}, and VOC emissions under both operating scenarios.

- Louisiana-Pacific is required to conduct a performance test to establish the appropriate mass emission rates from all affected sources controlled by thermal oxidizers (ID Nos. RTO-3 through RTO-6); as well as the proper operating temperatures, capture efficiency, and destruction efficiency of the capture and control devices in accordance with a testing protocol approved by the DAQ. Oxidizer testing shall be repeated within 60 months after the previous test.
- Total press production is limited to 684,786,667 square feet of finished product on a 3/8-inch basis per consecutive 12-month period. The permit specifies a formula for calculating the total press production.
- The diesel-fired emergency generator is limited to 400 total hours of operation per consecutive 12-month period.
- Total fuel input of recycled resinated wood fuel cannot exceed 20 percent on a heat input basis, equivalent to 10% by weight; and
- No more than five dryers (Nos. D-1 through D-5 and D-1A through D-5A) shall be operated simultaneously.

Louisiana-Pacific is required to record and keep records of the following in a logbook:

- the total amount of oriented strand board (OSB) produced
- the operating scenario each dryer and RTO is operating under
- the hours of operation of the oxidizers and emergency generator; and
- the recycled resinated wood fuel input to the bark burner on a heat input basis; equivalent weight percent.

Table 2.2-1 of Section 2.2 B of the permit provides VOC emission factors for use in estimating VOC emissions when the facility operates under its primary operating scenario. Under the heading "Miscellaneous Sources" in Table 2.2-1, the basis of the VOC emission factors for the edgeseal operations, printing operations, and the TechShield® process were specific material safety data sheets (SDS) which were either submitted in earlier permit applications or provided to DAQ by email. By tying the emission factors to these specific SDS, there was no means for Louisiana-Pacific to use different emission factors when the need to use different products from different vendors in these manufacturing processes. The basis for the VOC emission factors for these three sources (edgeseal operations, printing operations, and the TechShield® process) is being modified in this renewal so Louisiana-Pacific can use VOC emission factors identified in SDS or manufacturers formulation data provided with each shipment of each ingredient. Louisiana-Pacific will be required to keep records of the SDS or manufacturers formulation data provided with each shipment of each ingredient used to calculate VOC emissions.

As discussed in the permit review for the previous Louisiana-Pacific permit renewal (J. Lee, 07760T21, 6/30/2016), in accordance with the June 23, 2014 U.S. Supreme Court decision in Utility Air Regulatory Group v. EPA, 134 S. Ct. 2427 (2014), GHGs emissions would not trigger a PSD modification at this facility, because emissions of the other criteria pollutants are less than the PSD thresholds (250 tpy). For this reason, there is no need for a PSD avoidance condition for GHGs in the Louisiana-Pacific permit. This permit renewal with modification does not affect this status.

10. Risk Management Plan (RMP) Requirements

40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop a RMP in accordance with Section 112(r) of the Clean Air Act. The RMP lists the potential effects of a chemical accident at the facility, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident should occur.

Louisiana-Pacific is not subject to Section 112(r) requirements because it does not store any of the regulated substances in quantities above the thresholds in the rule. This permit renewal does not affect this status. Continued compliance is expected.

10. Compliance Assurance Monitoring (CAM)

The CAM rule (40 CFR 64) applies to each pollutant specific emissions unit located at a major source that is required to obtain a Title V, Part 70 or 71 permit if it meets all of the following criteria:

- It is subject to an emission limitation or standard, and
- It uses a control device to achieve compliance, and
- It has potential pre-control emissions that equal or exceed the major source threshold (i.e., either 100 tpy for criteria pollutants, 10 tpy of any individual HAP, or 25 tpy of any combination of HAP).

The following emission limitations or standards are exempted from the CAM rule:

- NSPS or NESHAP standards proposed after November 15, 1990;
- Stratospheric ozone protection requirements under Title VI of the Clean Air Act
- Acid rain program requirements;
- Emission limitations or standards or other requirements that apply solely under an approved emissions trading program;
- An emissions cap that meets requirements of 40 CFR 70.4(b)(12) or 71.6(a)(13);
- Emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method, as defined in 40 CFR 64.1, unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (e.g., a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).
- Certain municipally-owned utility units, as defined in 40 CFR 72.2.

Please note that the emission unit is not exempted from the CAM rule if nonexempt emission limitations or standards (e.g. a state rule or an older NSPS emission limits) apply to the emissions unit.

The CAM rule requires development of a CAM plan for all equipment located at a major source facility that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The following table indicates the emission sources at Louisiana-Pacific that are subject to/exempt from CAM.

Source ID No.	Description	Control Device?	Pre-controlled Emissions (tpy)	Subject to CAM?
WAFER DRYING PROCESS				
BARK1	Bark/wood fuel-fired burner	Five cyclones installed on each on the dryers (PCYCD-1 through PCYCD-5) Two wet electrostatic precipitators (WESP-1, WESP-2) Three propane/natural gas-fired regenerative thermal oxidizers (RTO-4, RTO-5, & RTO-6)	PM_{10} >100 VOC >100 CO >100	Yes
D-1 through D-5 (D-1A through D-5A)	Triple-pass wafer dryers (changing to single-pass wafer dryers)			Yes
TOH-1 & TOH-2	Two wood fuel/natural gas-fired thermal oil heaters			Yes
CYC9	Saw trim recovery (screen) cyclone	Exhausts to CP-003	NA	Exempt
FUEL PREP SYSTEM				
CP-003 & CP-004	Raw fuel bin transfer and loading system (high pressure blower)	Bagfilter (B-3) and/or bypass cyclone (CYC3)	PM_{10} >100	Yes
CP-007	Sanderdust bin transfer and loading system	Bagfilter (B-7)	PM_{10} >100	Yes
FUELPREP	Metering bin transfer and loading system	Bagfilter (B-8) and/or bypass cyclone (CYC-8)	PM_{10} >100	Yes
OSB FORMING PROCESS				
CP-002	Blender and forming bin aspiration systems	Bagfilter (B-2)	PM_{10} >100	Yes
CP-005	Mat reject and flying saw system	Bagfilter (B-5) and/or two bypass cyclones (CYC5-1 dry; CYC5-2 wet), and/or bypass cyclone (CYC5)	PM_{10} >100	Yes
PV-1 & PV-2	Two press enclosure vents	Propane/natural gas-fired regenerative thermal oxidizer (RTO-3)	PM_{10} <100 VOC <100	Exempt
TS-1	TechShield® Coating Operation	None	NA	Exempt
FINISHING PROCESS				
CP-001	Sawtrim and finishing line clean-up operation	Bagfilter (B-1) and/or bypass cyclone (CYC1)_	PM_{10} >100	Yes
CP-006	Tongue and groove and sanderdust aspiration system	Bagfilter (B-6) and/or bypass cyclone (CYC6)	PM_{10} >100	Yes
ENG1	Diesel-fired emergency generator	None	NA	Exempt
F-1	Bark handling fugitives	None	NA	Exempt

During the processing of Step 1 of a significant modification to the Louisiana-Pacific permit (Application No. 7300061.20B, Permit No. 07760T24, issued December 8, 2020), SSCB reviewed the CAM requirements in the previous permit (No. 07760T23, issued October 1, 2019). SSCB questioned why the permit required monitoring of visible emissions from the cyclone outlet only after the WESPs and RTOs (ID Nos. RTO-3 through RTO-6) are bypassed for more than 12 hours, and if the emissions during such a bypass were vented from the cyclones, or if there was a common stack for all control devices. The concern was that the wafer drying process could be a major source of particulate emissions when controlled by cyclones only, and may require continuous monitoring under CAM requirements. DAQ made the decision to address this issue in this permit renewal (for which Louisiana-Pacific had already submitted an application), so that the permit modification would not be delayed. Furthermore, a review of bypass events over the period from 2016 to 2021 showed that the bypass alarm was triggered at most 209 times. Generally, it takes at most 6-8 minutes to clear the dryer of wood flake, resulting in a maximum of 0.2 lb of particulate during a dryer bypass event. However, many of those events were very short term (less than a minute or two) and/or did not result in excess emissions. At any rate, the bypass events never came close to approaching 12 hours in duration.

Accordingly, the CAM requirements in the Louisiana-Pacific permit have been revised so that for the wafer drying process:

- the dryer cyclones are included in the CAM plan with WESPs and RTOs,
- defining continuous opacity monitoring (COM) on the common stack as a primary indicator, and
- a bypass event condition is added to be monitored with visible emissions as a secondary indicator. The length of the bypass event requiring monitoring has been changed from "more than 12 hours" to "more than six minutes".

Indicator [64.6(c)(1)(i)]	**Indicator No. 1**	**Indicator No. 2**
I. Indicator	Visible emissions	Visible emissions
Measurement Approach	Visible emissions from the wafer drying process will be monitored continuously using a continuous opacity monitoring (COM) system on the common stack (RTO outlet), when the WESPs and RTOs are **NOT** bypassed.	Visible emissions from the wafer drying process will be monitored using Reference Method 22-like procedures at the cyclone outlet (bypass abort stack) whenever the WESPS and/or RTOs are bypassed for more than six (6) minutes.
II. Indicator Range	An excursion is defined as visible emissions in amounts greater than **12%** (six-minute average). Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as visible emissions. Excursions trigger an inspection, corrective action, and a reporting requirement.
QIP Threshold	The QIP threshold is six excursions in a six-month reporting period.	None

Indicator [64.6(c)(1)(i)]	Indicator No. 1	Indicator No. 2
III. Performance Criteria		
A. Data Representativeness	Measurements are being made at the emission point (RTO outlet) of the common stack.	Measurements are being made at the emission point (cyclones outlet – bypass abort stack).
B. Verification of Operational Status	NA	NA
C. QA/QC Practices	The COM systems shall be calibrated, maintained, and operated according to 40 CFR 60, Appendix B, Performance Specifications (PS1) and Appendix F, Quality Assurance Procedures.	The observer will be familiar with Method 22 and follow Method 22-like procedures.
D. Monitoring Frequency	Data is collected continuously with the COM system.	A six-minute Method 22-like observation is performed whenever the WESPS and/or RTOs are bypassed for more than six (6) minutes.
E. Data Collection Procedures	Data from the COM system is collected electronically and maintained on the data acquisition and handling system computer along with information on the operating status of the thermal oil heaters. Alternatively, a suitable data recorder, including an analog strip chart recorder may be used, provided the specifications in PS-1 are met.	The number and duration of bypass events, and the visible emission observation is documented by the observer.
F. Averaging Periods	Six-minute Average	NA

The CAM requirements for the wood product forming and finishing operations remain as follows:

- Sources included: Sawtrim and finishing line clean-up operation (CP-001), blender and forming bin aspiration systems (CP-002), raw fuel bin transfer and loading system (CP-003 and CP-004), mat reject and flying saw system (CP-005), tongue and groove and sanderdust aspiration system (CP-006), and sanderdust bin transfer and loading system (CP-007), bypass cyclone (CYC5), saw trim recovery (screen) cyclone (CYC9) and metering bin transfer and loading system (FUELPREP)

- Emission Limits: properly designed collectors (02D .0512, particulate matter)

- Control Technology: pulse-jet bagfilters (B-1 through B-3 and B-5 through B-8); cyclones (CYC1, CYC3, CYC5-1 & CYC5-2, CYC6 and CYC8)

- Monitoring Approach: The pressure drop (ΔP) across the bagfilter is measured with a differential pressure gauge. ΔP is monitored continuously while the bagfilter is in operation, and manually recorded daily, at least once per shift. An excursion is defined as a pressure drop greater than 8.0”

H_2O or less than 0.1" H_2O. The QIP threshold is instantaneous ΔP readings outside range three times within a six-month period; if this occurs the QIP must be implemented. Records of excursions and corrective actions, inspection and maintenance must be maintained, and a semi-annual report is required.

11. Facility-wide Air Toxics Review

Louisiana-Pacific is subject to emission limits for the toxics listed in the following table, in accordance with 15A NCAC 02D .1100, "Control of Toxic Air Pollutants". These emission limits were established in accordance with Air Permit Application Nos. 7300061.04A and 7300061.09B), for an air toxic compliance demonstration (approved on April 28, 2004 and November 5, 2009, respectively), and Air Permit Application No. 7300061.13A (approval memorandum dated September 5, 2013).

Emission Source(S)	Toxic Air Pollutant(S)	Emission Limit(S)
RTO-4 through RTO-6 (combined) RTO-3	Acrolein (107-02-8)	20.32 lbs/hr 2.44 lbs/hr
RTO-4 through RTO-6 (combined)	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC-7778394)	0.0012 lbs/hr
RTO-4 through RTO-6 (combined) RTO-3 G-1[1]	Benzene (71-43-2)	0.60 lbs/hr 0.24 lbs/hr 332.8 lbs/yr
RTO-4 through RTO-6 (combined)	Beryllium Metal, unreacted (Component of BEC) (7440-41-7)	0.02 lbs/hr
RTO-4 through RTO-6 (combined)	Cadmium Metal, elemental, unreacted (Component of CDC) (7440-43-9)	0.03 lbs/hr
RTO-4 through RTO-6 (combined)	Chromium (VI) Soluble Chromate Compounds (Component of CRC) (SolCR6)	0.00042 lbs/hr
RTO-4 through RTO-6 (combined) RTO-3 CP-002 CP-003 and CP-004 CP-005 PF Tanks[1] TechShield® process	Formaldehyde (50-00-0)	6.54 lbs/hr 7.50 lbs/hr 1.90 lbs/hr 0.16 lbs/hr 0.095 lbs/hr 0.27 lbs/hr 0.27 lbs/hr
RTO-4 through RTO-6 (combined)	Hydrogen Chloride (7647-01-0)	182.54 lbs/hr
RTO-4 through RTO-6 (combined)	Manganese & compounds (MNC)	23.81 lbs/hr
RTO-4 through RTO-6 (combined) RTO-3 CP-002 CP-005 PF Tanks[1]	Phenol (108-95-2)	2.06 lbs/hr 17.3 lbs/hr 0.79 lbs/hr 0.018 lbs/hr 3.18 lbs/hr

[1] Insignificant activities

To ensure compliance with the above emission limits in the preceding table, the following restrictions shall apply:

- Total chip drying shall be limited to **89** oven dried tons per hour (the dryer design limitation),
- Total OSB production shall be limited to **106,260** square feet (measured on a 3/8-inch basis) per hour determined on a daily average.

This permit renewal and modification do not affect this status. Based on the most recent inspection, Louisiana-Pacific has been complying with this regulation.

In addition, the permit lists several NC toxic air pollutants (TAPs) and their respective toxic permit emission rates (TPERs) as established in 15A NCAC 02Q .0711, "Emission Rates Requiring a Permit".

Pollutant (CAS Number)	TPERs Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Acetaldehyde (75-07-0)				6.8
Benzo(a)pyrene (50-32-8)	2.2			
Carbon tetrachloride (56-23-5)	460			
Chlorine (7782-50-5)		0.79		0.23
Chlorobenzene (108-90-7)		46		
Chloroform (67-66-3)	290			
Di(2-ethylhexyl)phthalate (117-81-7)		0.63		
Ethylene dichloride (107-06-2)	260			
n-Hexane (110-54-3)		23		
Methyl chloroform (71-55-6)		250		64
Methyl ethyl ketone (78-93-3)		78		22.4
Methyl isobutyl ketone (108-10-1)		52		7.6
Methylene chloride (75-09-2)	1600		0.39	
Mercury, aryl and inorganic compounds		0.013		
Nickel metal (7440-02-0)		0.13		
Pentachlorophenol (87-86-5)		0.063	0.0064	
Perchloroethylene (127-18-4)	13000			
Styrene (100-42-5)			2.7	
2,3,7,8-Tetrachlorodibenzo-p-dioxins	0.00020			

Pollutant (CAS Number)	TPERs Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
(1746-01-6)				
Toluene (108-88-3)		98		14.4
Trichloroethylene (79-01-6)	4000			
Vinyl chloride (75-01-4)	26			
Xylene (1330-20-7)		57		16.4

Louisiana-Pacific has made a demonstration that its plant-wide actual emissions do not exceed the TPERs. The permit requires Louisiana-Pacific to operate and maintain the facility so that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed the TPERs; to maintain records that demonstrate compliance with each TPER, and to obtain a permit before exceeding any of these listed TPERs. Based on the most recent inspection, Louisiana-Pacific has been complying with this regulation. Continued compliance will be determined during subsequent inspections.

12. Facility Emissions Review

The table in the header page of this review summarizes total actual emissions in tons per year reported by Louisiana-Pacific for the years 2016 through 2020. The emissions data show minor increases in HAP emissions over that time period (from 57.91 tons in 2016 to 59.53 tons in 2020), with an increase in PM_{10} emissions from 40.95 tons in 2016 to 66.38 tons in 2020. From all indications, Louisiana-Pacific has been complying with the emission limits in their permit. DAQ will continue to monitor the facility to confirm compliance with permit requirements.

13. Compliance History and Status

The following chronology dates from when the Louisiana-Pacific permit was last renewed on June 30, 2016.

July 29, 2016	RRO issues Notice of Deficiency (NOD) to Louisiana-Pacific for not performing the required annual maintenance on the diesel-fired pump (IS-DF-1) during calendar year 2015. Louisiana-Pacific is required to respond in writing by August 19, 2016, describing actions it will take to ensure future compliance with air permit requirements.
August 16, 2016	DAQ issues letter to Louisiana-Pacific regarding their second quarter 2016 opacity excess emission report for dryer regenerative thermal oxidizers (RTOs) 4, 5, and 6. DAQ review found that the quality assurance (QA) test results for the continuous opacity measurement system (COMS) appear to meet the quarterly specifications.
November 4, 2016	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2016 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.

February 10, 2017	DAQ issues letter to Louisiana-Pacific regarding their fourth quarter 2016 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
May 16, 2017	DAQ issues letter to Louisiana-Pacific regarding their first quarter 2017 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
August 14, 2017	DAQ issues letter to Louisiana-Pacific regarding their second quarter 2017 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
September 27, 2017	Stanley Williams, RRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
November 7, 2017	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2017 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
February 12, 2018	DAQ issues letter to Louisiana-Pacific regarding their fourth quarter 2017 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
May 22, 2018	DAQ issues letter to Louisiana-Pacific regarding their first quarter 2018 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
June 14, 2018	Matthew Mahler, RRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
December 6, 2018	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2018 opacity excess emission report for the dryer RTOs. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
January 29, 2019	Matthew Mahler, RRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
February 12, 2019	DAQ issues letter to Louisiana-Pacific regarding their fourth quarter 2018 opacity excess emission report for the thermal oil heaters (TOH-1 and TOH-2). DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
May 10, 2019	DAQ issues letter to Louisiana-Pacific regarding their first quarter 2019 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
September 23, 2019	DAQ issues letter to Louisiana-Pacific regarding their second quarter 2019 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.

December 6, 2019	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2019 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
January 30, 2020	Matthew Mahler, RRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
February 21, 2020	DAQ issues letter to Louisiana-Pacific regarding their fourth quarter 2019 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
May 8, 2020	DAQ issues letter to Louisiana-Pacific regarding their first quarter 2020 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
September 23, 2020	DAQ issues letter to Louisiana-Pacific regarding their second quarter 2020 opacity excess emission report for thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
November 17, 2020	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2020 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
March 1, 2021	DAQ issues letter to Louisiana-Pacific regarding their fourth quarter 2020 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
March 31, 2021	Matthew Mahler, RRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
May 28, 2021	DAQ issues letter to Louisiana-Pacific regarding their first quarter 2021 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
August 25, 2021	DAQ issues letter to Louisiana-Pacific regarding their second quarter 2021 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.
November **, 2021	DAQ issues letter to Louisiana-Pacific regarding their third quarter 2021 opacity excess emission report for the thermal oil heaters. DAQ review found that the QA test results for the COMS appear to meet the quarterly specifications.

In summary, since the NOD issued in 2016, Louisiana-Pacific has been in compliance with the requirements of their permit. Continued compliance is expected.

14. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each

permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above.

Virginia is an affected state within 50 miles of the facility. There are no affected local programs within 50 miles of the facility.

Notice of the DRAFT Title V Permit to Affected States ran from XXXX YY, 2022, to XXXX YY, 2022. ***Discuss any comments received from Affected States or Local Programs.***

Public Notice of the DRAFT Title V Permit ran from XXXX YY, 2022, to XXXX YY, 2022. ***Discuss any public comments received.***

EPA's 45-day review period ran concurrent with the 30-day Public Notice, from XXXX YY, 2022, to XXXX YY, 2022. ***Discuss any comments received from EPA and U.S. EPA Region 4 regarding the DRAFT Title V Permit.***

15. Other Regulatory Considerations

The following items were not required for Permit Application No. 7300061.20A:

- Professional Engineer's seal
- Zoning consistency determination
- Permit fee.

16. Recommendations

DAQ has reviewed the permit application(s) for Louisiana-Pacific Corporation – Roxboro located in Roxboro, Person County, North Carolina to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 07760T25.