



## **MODIFICATION SUPPORT DOCUMENT**

**Air Operating Permit 0003697**

**Packaging Corporation of America  
31831 West Highway 12  
P.O. Box 138  
Walla, WA 98504**

Permit Issued Date: March 30, 2018  
Permit Effective Date: April 1, 2018  
Permit Expiration Date: March 31, 2023  
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## 1.0 INTRODUCTION

This document, the modification support document, summarizes the legal and factual basis for the modification of the Air Operating Permit issued by the Washington State Department of Ecology (Ecology) to the source. When Ecology issues a Draft Operating Permit, we must provide a statement that sets forth the legal and factual basis for these draft permit conditions, including references to the applicable statutory or regulatory provisions per Washington Administrative Code (WAC) 173-401-700(8).

Unlike the Air Operating Permit, this document is not legally enforceable. This modification support document summarizes the proposed changes to the Air Operating Permit. The Permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the Permittee from the requirements of the permit.

This permit is being modified to reflect changes to Packaging Corporation of America's (PCA) operations and to incorporate recent changes to the Code of Federal Regulations (CFR). The changes are detailed below.

- 1. New owner/operator.** This permit was previously issued to Boise White Paper, L.L.C, a subsidiary of PCA. Effective as of July 1, 2019, the facility assets have been assigned to its parent corporation, PCA. The permit has been updated with PCA as the new Permittee. Other administrative changes are listed in Section F of this document.
- 2. Conversion to all unbleached operations.** PCA shutdown bleaching operations May 2018 per State Administrative Order No. 15757. The modified permit removes or alters permit conditions specific to bleached operations.
- 3. Paper Machine No.3 Rebuild Project.** PCA was permitted to complete a Paper Machine No.3 Rebuild Project via PSD 18-01 and NOC Order No. 15783 in September 2018. The project increased the maximum daily capacity of the machine and also increased the pulping capacity of the No.2 M&D Digester. Permit conditions in both PSD 18-01 and NOC Order NO. 15783 have been incorporated into the modified permit.
- 4. Updates to 40 CFR Part 63 Subpart MM.** Additional modifications were made to include recent changes to regulations. Updates to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) in 40 CFR Part 63 Subpart MM have been included, and the Startup, Shutdown, and Malfunction (SSM) Plan Requirements previously in the same subpart have been removed.

Ecology considers this permit modification a significant modification. This permit modification involves significant changes to existing monitoring, reporting, and recordkeeping requirements in the permit. Therefore it does not meet the definition of a minor permit modification per WAC 173-401-725(2)(a)(i).

This proposed modification includes removal of sections from the existing permit and the addition of other sections. As a result, the permit conditions are not the same between the existing permit and the proposed modified permit. For the purposes of this support document, references to permit conditions are for the proposed permit, unless otherwise specified.

## 2.0 CHANGES TO PERMIT

### A. 40 CFR Part 63 Subpart MM

The United States Environmental Protection Agency (EPA) issues NESHAPs for specific source categories. The NESHAP for Subpart MM, Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills, was reviewed and modified on October 5, 2017 following the Residual Risk and Technology Review (RTR). Ecology incorporated the new requirements into our rules on January 24, 2018. The Air Operating Permit has been modified to reflect the changes in 40 CFR Part 63 Subpart MM. Certain conditions for the following emission units have been modified to reflect the current regulations in 40 CFR Part 63 Subpart MM: No.2 Recovery Furnace, No.3 Recovery Furnace, Lime Kiln, No.2 Smelt Tank, and No.3 Smelt Tank. These modifications include:

- A requirement to perform source testing every five years.
- A requirement to submit excess emissions and continuous monitoring performance testing reports semi-annually, rather than quarterly.
- New definitions for excess emission allowance for recovery furnaces, which has been changed from 6% of the total number of operating hours in a quarter to 2% of the total number of operating hours during any semiannual period.
- Periods of Startup, Shutdown, and Malfunction are no longer able to be excluded from excess emissions tracking for Subpart MM.

In addition to including the new requirements, Ecology also took the opportunity to separate the HAP metal requirements from the particulate matter (PM) and opacity requirements to improve clarity. In the existing permit, the HAP metal requirements were combined with PM and opacity requirements due to the fact that the HAP metal requirements use PM and opacity as surrogates and the respective limits were the same as other PM and opacity requirements. However, the monitoring and reporting requirements were not always the same and it has become cumbersome to try to distinguish between the underlying requirements for each of the limits.

Affected permit conditions are: A.1.a., A.1.b, A.3.a, A.3.b, A.3.c, B.1.b, B.1.c, B.2.a, B.2.b, B.2.c, C.1.a, C.1.b, D.1.a, D.1.b, E.1.a.

### B. Startup, Shutdown, and Malfunction (SSM) Plan Requirements

The RTR which was completed for the NESHAP for Subpart MM resulted in the EPA removing the SSM Plan requirements from Subpart MM. The proposed modification to the Air Operating Permit removes the SSM Plan requirements from Section S of the Air Operating Permit.

Affected permit conditions are: C.7.b, D.5.b, E.3.b, Section S.

The following original permit conditions were removed: A.8, B.11, C.8, D.6, and E.4.

C. Bleaching Operations

PCA shut down their bleaching operations in May 2018 per State Administrative Order No. 15757. Sections K (Chlorine Dioxide Generation Unit) and M (Bleach Plant) from the previous permit detailed limits specific to the bleach plant operations. These sections have been removed. It is noted that Section K included state-only requirements from Order DE 96-AQI078. This order contains requirements for other units as well and will remain in effect. However, the requirements from the order associated with the Chlorine Dioxide Generation Unit are no longer applicable and the respective requirements have been removed for clarity.

Chlorine Dioxide was present on site while Boise was producing bleached product. This substance is subject to the chemical accidental release regulations in 40 CFR Part 68. Requirements included the creation of a risk management plan and to include the requirements of 40 CFR Part 68 in the annual compliance certification. Chlorine dioxide is no longer present with bleaching operations shut down. These requirements, previously stated under “Facility Wide General Requirements”, Condition 13, have been removed. This condition has been revised to include general duties associated with chemical storage.

Affected permit conditions are: Facility Wide General Requirements, Condition 13.

The following original permit conditions were removed: Sections K and M.

D. HAP Removal and Destruction

Federal regulations require at least 11.1 lbs of hazardous air pollutant (HAP) collection per oven dried ton of pulp for bleached operations. This condition has been updated to reflect the requirement for unbleached operations of at least 7.2 lbs of HAP collection per ton of oven dried ton of pulp. Bleached operations require at least 10.2 lbs of HAP destruction per oven dried ton of pulp. This condition has been updated to reflect the requirement for unbleached operations of at least 6.6 lbs of HAP destruction per ton of oven dried ton of pulp.

Total aerator horsepower is used as a performance indicator for HAP destruction. The permit previously cited a minimum HP from a performance test completed in September 2008 with minimum horsepower set at 63,686 HP/day. This requirement has been updated to reflect the most recent performance test was completed in May 2017 with minimum horsepower set at 57,000 HP/day. However, the performance test in May 2017 reflects bleached operations.

A requirement for PCA to perform a subsequent performance test reflecting unbleached operations for both the pulping condensate collection and treatment system and the clean condensate alternative have been included in the revised permit.

Affected permit conditions are: N.2, N.3, N.4, N.5, N.6, O.2.a, O.2.b, O.6.b, O.6.c, O.6.d

The following original permit conditions were removed: P.6.e

#### E. Paper Machine No.3 Rebuild Project

PSD 18-01 and NOC Order No. 15783 were issued on September 18, 2018 and September 26, 2018 respectively. These documents permitted Boise's Paper Machine No.3 (No. 3 PM) Rebuild Project. The conditions in PSD 18-01 and NOC Order No. 15783 have been included in the amended permit.

It is noted that Section VI.B of PSD 18-01 includes BACT determinations for emissions of nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) from the No. 2 M&D Digester (Table VI-2). As stated in Section V of the PSD, the production and operational limits specified in V.B. through V.D. were established through consideration of the BACT determinations and are, therefore, intended to indicate compliance with those determinations. Condition V.A is a production limit for No. 3 PM which is reflective of the maximum production rate evaluated under the project. Production rates above that limit would need to be evaluated to determine if a new or modified PSD or NOC permit is required.

As part of the project, the No. 2 M&D Digester was modified. As a result, the No. 2 M&D Digester became subject to 40 CFR Part 60 Subpart BBa. The permit was updated to incorporate the associated new requirements. Additionally, Condition VIII.B of PSD 18-01 requires that the temperature monitoring shall be consistent with 40 CFR 60.284a, which is assumed to imply the temperature monitoring requirement specified by 40 CFR 60.284a(b)(1). Ecology's Industrial Section notes that the gases from the digester will either be sent to the lime kiln, which is subject to 40 CFR Part 60 Subpart BB and is required to monitor TRS emissions rather than temperature (in accordance with 40 CFR 60.283a(a)(1)(i) and 60.284a(a)(2)), or to the hog fuel boiler, which is not an incinerator and, therefore, not subject to 60.284a(b)(1). The assumption that the hog fuel boiler is not an incinerator is supported in EPA's support document for the 1986 rulemaking effort (EPA-450/3-85-020, *Kraft Pulp Mills – Background Information for Promulgated Revisions to Standards*), which includes the following statements:

- “The Agency proposed to eliminate temperature monitoring requirements for power boilers, recovery furnaces, and lime kilns.

The basis of the proposal is that the flame temperatures and residence times at which these facilities are expected to operate exceed the 1200° F and ½ second considered necessary for adequate incineration of TRS emissions.”

- “Further, prevention of energy waste and of fouling of heat transfer surfaces in power boilers is sufficient incentive for the owners of these facilities to properly operate and maintain them.”

Even though temperature monitoring is not required for the hog fuel boiler by 40 CFR Part 60 Subparts BB or BBa, the temperature monitoring requirement imposed by PSD Permit 18-01 may be used to indicate non-compliance with Condition F.25. The excess emission language from 40 Subpart BB and BBa has been included in Condition F.25 to make it clear how excess emissions are determined and how they should be reported. Affected permit conditions are: F.25, J.1, Section K, Section R, Facility Wide Condition 33, Appendix A, and Appendix B

#### F. Administrative Changes

Ecology made several administrative changes to the modified permit. These changes are briefly described below.

- Boise recently submitted a notification to Ecology regarding the transfer of ownership from Boise White Paper, LLC to Packaging Corporation of America. The modified permit identifies Packaging Corporation of America as the new Permittee.
- Ecology recently revised WAC 173-400. The permit has been updated to reflect that changes to WAC 173-400-107, 108, and 109. The changes will not be effective until the rules are incorporated into the state’s implementation plan.
- Ecology recently revised Chapter 173-405 WAC. As part of that revision, WAC 173-405-072 was revised to allow submittal of source test results 60 days after test. The permit has been updated to reflect that rule change.
- In reviewing the 40 CFR Part 60 BB monitoring requirements for the Lime Kiln, Ecology noted that the original permit did not require the oxygen monitoring needed to adjust the measured total reduced sulfur (TRS) emissions, as required by 40 CFR Part 60, Subpart BB. It was also noted that the averaging period requirements specified by 40 CFR Part 60, Subpart BB were not included in the original permit. Both of these requirements were added to the modified permit.
- The Facility-Wide General Requirements were updated to include the requirements associated with transfer of ownership, as specified by WAC 173-401-720.

- Conditions A.1.b, B.1.c., C.1.a, D.1.a., and E.1.a have been updated to include the underlying requirements that the EPA Method 5 performance tests for HAP metals from recovery furnaces, smelt dissolver tanks, and lime kilns must consist of runs that are at least 60 minutes, a minimum sample collection volume of 31.8 dry standard cubic feet, and that water must be used as the cleanup solvent instead of acetone in the sample recovery procedure. (This change was made after the public comment period and EPA’s 45-day review period).
- Condition D.5.a previously stated “Note: Maintain 1 hour scrubber recirculation rate and ...” This averaging period was incorrect. This statement has been changed to: “Note: Maintain 3-hour block scrubber recirculation rate and ...”
- Condition E.3.a previously stated “Note: Maintain 1 hour scrubber recirculation rate equal or greater than 25 gpm and pressure drop less than 2” H<sub>2</sub>O...” This statement regarding the averaging period and pressure drop contained an error and has been changed to “Note: Maintain 3-hour block scrubber recirculation rate equal or greater than 25 gpm and pressure drop greater than 2” H<sub>2</sub>O”.
- Condition F.6 contains a limit for SO<sub>2</sub> emissions of 1000 ppm, one hour average at 7% O<sub>2</sub> for the hog fuel boiler. The unmodified permit did not specify a monitoring frequency. The fact sheet of the unmodified permit provides calculations showing that it is not possible to exceed this limit when burning fuel with a sulfur content of 2% or less by weight, or if burning natural gas. The monitoring requirement was modified to require that the facility only burn fuel oil that contains 2% or less sulfur content and to report any occasion where that requirement is not met.
- Conditions G.4 and H.2 include the same SO<sub>2</sub> limit for No. 1 and No. 2 Power Boilers, which only burn fuel oil and natural gas. Both conditions have been modified to include the following: “Compliance is indicated by either burning natural gas or fuel oil. Fuel oil fired cannot exceed 2% sulfur content by weight. Maintain fuel receipts showing that all fuel oil fired is ≤ 2% sulfur. Report all occasions when fuel oil with sulfur content greater than 2% is burned.”
- Permit Conditions G.7 through G.13 and H.6 through H.12 were incorrectly identified as State-Only requirements in the unmodified permit. The general state-only statement before G.4 and H.3 was removed and was moved to the appropriate conditions (G.5, G.6 and H.3 through H.5).
- Condition M.3 previously defined excess emissions as periods in excess of “1% of total operating time”. This has been revised to “1% of total operating time in a semi-annual period”. The phrase “in a semi-annual period” was erroneously omitted in the original permit.
- Condition O for the Clean Condensate Alternative previously contained an allowance for condensate non-collection up to 4% of the total operating time.

EPA guidance on the Clean Condensate Alternative has stated that this 4% allowance is not applicable to Clean Condensate Alternative. This allowance has been removed from the permit. Additional clarifying language has been added throughout Condition O. See “Response to Comments” for more information. (This change was made after the public comment period and EPA’s 45-day review period).

- Conditions A.4, B.5.b, C.3, and F.6, G.4, H.2, and Facility-Wide General Requirement 10 contained an outdated referenced to WAC 173-405-040(11). These references have been updated to WAC 173-405-040(9).
- Facility Wide General Requirement 19 contained an incorrect WAC reference. It has been corrected.

Affected permit conditions: A.1.a, A.1.b, A.2.b, A.4, B.1.a, B.1.c., B.5.b, C.,1.a, C.1.b, C.1.c, C.3 C.6.a, C.8, D.1.a, D.1.b, E.1.a,E.1.b, E.3.a, F.1, F.6, G.4, G.5, G.6, H.2, H.3, H.4, H.5, M.3, O, and Facility-Wide General Requirements 10, 19, 21, 35, and 55.

### **3.0 PUBLIC INVOLVEMENT INFORMATION**

Ecology proposes to modify AOP 00003697. We will publish a Public Notice of Modification August 9, 2019 in the Tri-City Herald to inform the public that a draft permit modification and supplemental support document are available for review.

Interested persons are invited to submit written comments regarding the draft permit modification. The draft permit modification, support document, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the Ecology office listed below.

Department of Ecology  
Industrial Section  
300 Desmond Drive  
Lacey, WA 98503

Call (360) 407-6916 to make an appointment.

Documents are also available:

- Mid-Columbia Library, Kennewick Branch, 1620 S Union, Kennewick, Washington
- Online at <https://fortress.wa.gov/ecy/industrial/UIPermit/DraftPermits.aspx>

Submit written comments:

- Using the online comment form at <http://ac.ecology.commentinput.com/?id=KgPpB>
- By mail or fax to:  
Emily Toffol  
Department of Ecology  
Industrial Section  
P.O. Box 47600  
Olympia, WA 98504-7600

Comments should reference specific text followed by the requested change or concern when possible. **Ecology will only consider comments that pertain to the permit conditions we propose to modify, as described above.**

We will consider all comments received within thirty (30) days from the date of public notice of the draft indicated above, in formulating a final determination to modify the permit. Response(s) to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

If you have questions, or need additional information, you may also call Emily Toffol at (360) 407-6954.

## **Appendix A - Response to Comments**

The 30-day public comment period for the modification of this AOP took place August 8, 2019 through September 9, 2019. Only one comment was received. The comment was from Packaging Corporation of America. The comment is presented below along with Ecology's response.

### **Comment (Packaging Corporation of America):**

Packaging Corporation of America requests extending the due dates for the initial performance tests listed in Condition N.6 and Condition O.2.a from October 31, 2019 to January 31, 2020. The mill had anticipated completing the performance tests in October 2019, however, several maintenance shutdowns have been scheduled for October 2019. Extending the performance test due dates will allow the mill to conduct the performance tests over a 15-day period representative of normal operations without being impacted by scheduled shutdowns.

### **Ecology Response:**

The requested changes have been made to Condition N.6 and Condition O.1.a. Condition O.2.a was renumbered to condition O.1.a after the modification to section O discussed under "Administrative Changes" was made.

While reviewing the requested change, it became apparent that the language in the permit did not completely incorporate the approved CCA. Ecology has updated Condition O to more accurately reflect how PCA is demonstrating compliance with their CCA and the underlying requirements.

### **Additional Administrative Change:**

During the public comment period and EPA 45-Day review period, Ecology recognized 40 CFR Part 63 Subpart MM requires modifications to the EPA RM 5 for some of the required performance tests. Ecology added clarifying language in the modified AOP to make the modifications apparent to the Permittee. Please refer to the 6<sup>th</sup> bullet under Section F of the Support Document above for more information.