



Notice of Construction Application

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to 2 hours of free pre-application help. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal (see below). For more help than the initial 2 free hours, submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Completing the application, enclose it with a check for the initial fee and mail to:

**WA Department of Ecology
Cashiering Unit
P.O. Box 47611
Olympia, WA 98504-7611**

For Fiscal Office Use Only:
001-NSR-216-0299-000404

Check the box for the location of your proposal. For help, call the contact listed below.		
	Ecology Permitting Office	Contact
☐ CRO	Chelan, Douglas, Kittitas, Klickitat, or Okanogan County Ecology Central Regional Office – Air Quality Program	Lynnette Haller (509) 457-7126 lynnette.haller@ecy.wa.gov
☐ ERO	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County Ecology Eastern Regional Office – Air Quality Program	Karin Baldwin (509) 329-3452 karin.baldwin@ecy.wa.gov
☐ NWRO	San Juan County Ecology Northwest Regional Office – Air Quality Program	Dave Adler (425) 649-7267 david.adler@ecy.wa.gov
☒ IND	Kraft and Sulfite Paper Mills and Aluminum Smelters Ecology Industrial Section – Waste 2 Resources Program Permit manager: <u>Ha Tran</u>	James DeMay (360) 407-6868 james.demay@ecy.wa.gov
☐ NWP	U.S. Department of Energy Hanford Reservation Ecology Nuclear Waste Program	Lilyann Murphy (509) 372-7951 lilyann.murphy@ecy.wa.gov

To request ADA accommodation, call (360) 407-6800, 711 (relay service), or 877-833-6341(TTY). ECY



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Check the box for the fee that applies to your application.

New project or equipment

☐	\$1,500: Basic project initial fee covers up to 16 hours of review
☐	\$10,000: Complex project initial fee covers up to 106 hours of review

Change to an existing permit or equipment

☐	\$200: Administrative or simple change initial fee covers up to 3 hours of review Ecology may determine your change is complex during completeness review of your application. If your project is complex, you must pay the additional \$675 before we will continue working on your application.
☒	\$875: Complex change initial fee covers up to 10 hours of review
☐	\$350 flat fee: Replace or alter control technology equipment (WAC 173-400-114) Ecology will contact you if we determine your change belongs in another fee category. You must pay the fee associated with that category before we will continue working on your application.

Read each statement, then check the box next to it to acknowledge that you agree.

☒	The initial fee you submitted may not cover the cost of processing your application. Ecology will track the number of hours spent on your project. If the number of hours Ecology spends exceeds the hours included in your initial fee, Ecology will charge you \$95 per hour for the extra time.
☒	You must include all information in this application. Ecology may not process your application if it does not include all the information requested.
☒	Submittal of this application allows Ecology staff to inspect your facility.



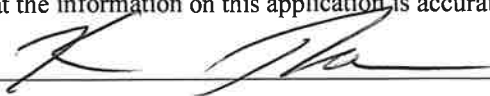
Notice of Construction Application

Part 1: General Information

I. Project, Facility, and Company Information

1. Project Name Modification to Order No. DE 02AQIS-3588
2. Facility Name Packaging Corporation of America
3. Facility Street Address 31831 W Hwy 12, Wallula, WA 99363
4. Facility Legal Description Packaging Corporation of America
5. Company Legal Name (if different than Facility Name) Same
6. Company Mailing Address (street, city, state, zip) Same

II. Contact Information and Certification

1. Facility Contact Name (who will be on-site) Paul Butkus	
2. Facility Contact Mailing Address (if different than Company Mailing Address) Same	
3. Facility Contact Phone Number 509-545-3241	4. Facility Contact Email paulbutkus@packagingcorp.com
5. Billing Contact Name (who should receive billing information) Paul Butkus	
6. Billing Contact Mailing Address (if different than Company Mailing Address) Same	
7. Billing Contact Phone Number Same	8. Billing Contact Email Same
9. Consultant Name (optional – if 3rd party hired to complete application) N/A	
10. Consultant Organization/Company N/A	
11. Consultant Mailing Address (street, city, state, zip) N/A	
12. Consultant Phone Number N/A	13. Consultant Email N/A
13. Responsible Official Name and Title (person responsible for project policy or decision-making) Kurt Thorne/Mill Manager	
14. Responsible Official Mailing Address Same	
15. Responsible Official Phone 509-545-3271	16. Responsible Official Email kurtthorne@packagingcorp.com
18. Responsible Official Certification and Signature I certify that the information on this application is accurate and complete.	
Signature  Date 9/23/22	



Notice of Construction Application

Part 2: Technical Information

The Technical Information may be sent with this application to the Ecology Cashiering Unit, or may be sent directly to the appropriate Ecology office along with a copy of this application.

For all sections, check the box next to each item as you complete it.

III. Project Description

Attach the following to your application:

- ☒ Description of your proposed project → CHANGE TO EXISTING ORDER
- ☒ Projected construction start and completion dates
- ☒ Operating schedule and production rates
- ☒ List of all major process equipment with manufacturer and maximum rated capacity
- ☒ Process flow diagram with all emission points identified
- ☒ Plan view site map
- ☒ Manufacturer specification sheets for major process equipment components
- ☒ Manufacturer specification sheets for pollution control equipment
- ☒ Fuel specifications, including type, consumption (per hour and per year), and percent sulfur

IV. State Environmental Policy Act (SEPA) Compliance

Check the appropriate box below.

- ☒ SEPA review is complete.
Include a copy of the final SEPA checklist and SEPA determination (e.g., DNS, MDNS, EIS) with your application.
- ☒ SEPA review has not been conducted.

- ☐ If SEPA review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit.

Agency Reviewing SEPA:

-
- ☐ If SEPA review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at www.ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-document-templates

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V. Emissions Estimations of Criteria Pollutants

Does your project generate air pollutant emissions? ☐ Yes ☒ No

If yes, provide the following information about your air pollutant emissions:

- ☐ Air pollutants emitted, such as carbon monoxide (CO₂), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), and volatile organic compounds (VOC), particulate matter (PM_{2.5}, PM₁₀, TSP), sulfur dioxide (SO₂)
- ☐ Potential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year (include calculations)
- ☐ Fugitive air pollutant emissions – pollutant and quantity

VI. Emissions Estimations of Toxic Air Pollutants

Does your project generate toxic air pollutant emissions? ☐ Yes ☒ No

If yes, provide the following information about your toxic air pollutant emissions:

- ☐ Toxic air pollutants emitted (specified in WAC 173-460-150¹)
- ☐ Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)
- ☐ Fugitive toxic air pollutant emissions - pollutant and quantity

VII. Emission Standard Compliance

Does your project comply with all applicable standards identified? ☒ Yes ☐ No

- ☒ Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under the Washington Clean Air Act, Chapter 70.94 RCW.

VIII. Best Available Control Technology

- ☒ Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.

¹ <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-460-150>

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IX. Ambient Air Impacts Analyses

Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? ☐ Yes ☒ No

Provide the following:

- ☒ Ambient air impacts analyses for criteria air pollutants (including fugitive emissions)
- ☒ Ambient air impacts analyses for toxic air pollutants (including fugitive emissions)
- ☒ Discharge point data for each point included in ambient air impacts analyses (include only if modeling is required)
 - ☐ Exhaust height
 - ☐ Exhaust inside dimensions (diameter or length and width)
 - ☐ Exhaust gas velocity or volumetric flow rate
 - ☐ Exhaust gas exit temperature
 - ☐ Volumetric flow rate
 - ☐ Discharge description (i.e., vertically or horizontally) and if there are any obstructions (e.g., raincap)
 - ☐ Emission unit(s) discharging from the point
 - ☐ Distance from the stack to the nearest property line
 - ☐ Emission unit building height, width, and length
 - ☐ Height of tallest building on-site or in the vicinity, and the nearest distance of that building to the exhaust
 - ☐ Facility location (urban or rural)

PACKAGING CORPORATION OF AMERICA

PACKAGING CORPORATION OF
AMERICA
Wallula Containerboard Mill
31831 West Highway 12
Wallula, WA 99363

16156

INVOICE DATE	YOUR REFERENCE	OUR REFERENCE	INVOICE AMOUNT	DISCOUNT	NET
9/19/2022	Permit Application		875.00	0.00	875.00

VENDOR NO	TOTAL GROSS AMOUNT	TOTAL DISCOUNT	TOTAL PAID
132553-1	875.00	0.00	875.00

DETACH BEFORE DEPOSITING

THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - HOLD AT AN ANGLE TO VIEW**PACKAGING CORPORATION OF AMERICA**

PACKAGING CORPORATION OF
AMERICA
Wallula Containerboard Mill
31831 West Highway 12
Wallula, WA 99363

THE NORTHERN TRUST COMPANY
CHICAGO, IL
PAYABLE THROUGH
NORTHERN TRUST BANK / DUPAGE
OAK BROOK TERRACE, IL

70-2382719

CHECK NO
16156

CHECK DATE
9/22/2022

CHECK AMOUNT
\$875.00

EIGHT HUNDRED SEVENTY FIVE DOLLARS AND ZERO CENTS

PAY TO
THE
ORDER
OF

DEPARMENT OF ECOLOGY

Void After 90 Days

DEPARMENT OF ECOLOGY
CASHIERING UNIT
PO BOX 47611
OLYMPIA, WA 98504-7611
USA

Barnes A. Barnes

⑈00016156⑈ ⑆071923828⑆000038697861⑈

September 22, 2022

Ms. Ha Tran
Department of Ecology
Industrial Section
PO Box 47600
Olympia, WA 98504-7600

Subject: Order DE 02AQIS-3588 Modification

Dear Ms. Tran:

Packaging Corporation of America (PCA) is requesting a modification to Condition 2.4 of Order DE 02AQIS-3588 issued May 8, 2002. The condition limits the combustion of non-condensable gases (NCGs) in the Hog Fuel Boiler to 1,200 hours per year to meet the sulfur dioxide (SO₂) emission limit of 102 tons/year (see Appendix A). PCA is requesting that the monitoring and reporting requirement of the condition be changed to evaluate actual mass-based emissions of SO₂ derived from production rates and applicable emission factors rather than the current time-based requirement.

This request is for an administrative change to incorporate an alternative method for calculating the actual SO₂ emissions associated with NCG combustion in the Hog Fuel Boiler. There are no physical projects associated with this request and therefore no new construction, no modification of an existing unit, and no change in a method of operation. Furthermore, there are no associated increases in emissions.

The current monitoring requirement of 1,200 hours per year was derived from virgin pulp production rates and applicable National Council for Air and Stream Improvement (NCASI) emission factors, as shown in the table developed by Trinity Consultants which was included in the original Order application (see Appendix B). This calculation used the average daily pulp production rates for the year 2000 and assumed that the entirety of the 1,200 hours of NCG combustion in the Hog Fuel Boiler would occur while operating at the year 2000 average pulping rate (i.e., 1,142 ADTUBPD). In actuality, the majority of the NCG combustion in the Hog Fuel Boiler tends to occur when the primary NCG incinerator, the Lime Kiln, is unavailable due to scheduled shutdowns or unplanned outages. At these times when the Lime Kiln is shut down, the virgin pulping rates tend to be much less than those used in the original permit calculation due to coinciding shutdowns of the digesters, slow backs in the recausticizing cycle, and/or low cooking liquor inventory. Ultimately, these lower pulp production rates lead to lower SO₂ emissions per hour of NCG combustion time in the Hog Fuel Boiler as compared to the assumptions built into the original Order limit. Appendix C shows the total virgin pulp production rates per year over the past five years when burning NCGs in the Hog Fuel Boiler along with the actual SO₂ emissions calculated using the emission factor derived in the original Order application.

PCA proposes to use the SO₂ emission factor derived in the original Order application to calculate the SO₂ emissions released from the Hog Fuel Boiler based on the actual

virgin pulping production rates while burning NCGs in the Hog Fuel Boiler. This monitoring method will more accurately estimate actual emissions and demonstrate compliance with the 102 tons/year limit regardless of the number of hours of NCG combustion it takes to reach that limit.

The proposed changes to the Order condition are shown below with deleted text in red, strikethrough font and new text in blue, underlined font.

Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting ¹	Applicable Requirement(s)
SO ₂	102 tons/year 12 month rolling annual average.	The Permittee shall record time of combustion of low volume, high concentration (LVHC) noncondensable gas (NCG). <u>The SO₂ emissions shall be calculated using the emission factor derived in the reference Order, 3.57 lb/ADTUBP. Report the rolling annual average in the monthly report.</u> The combustion shall not exceed 1,200 hours per year. Report the hours of combustion with semiannual MACT reporting requirements.	Order DE 02AQIS-3588 for limit

This requested modification becomes critical in demonstrating compliance with the limit when the Lime Kiln experiences extensive downtime due to planned and unplanned maintenance events requiring extended periods of NCG combustion in the Hog Fuel Boiler. PCA appreciates Ecology's consideration of the request.

If you have need of further information or clarification, please contact me at (509) 545-3241.

Sincerely,



Paul Butkus
Environmental Manager

Appendix A

Excerpt from Order DE 02AQIS-3588 showing referenced limit:

Boise Cascade Wallula Mill
Order No. DE 02AQIS-3588
Page 5 of 1

reporting requirements listed in Table 2 for the Hog Fuel Boiler. A 180-day testing and break-in period is allowed, after any part or portion of this project becomes operational, to make any changes or adjustments required to comply with applicable rules and regulations pertaining to air quality and conditions of operation imposed herein.

Table 2. Emissions Limits and Monitoring and Reporting Requirements for the Hog Fuel Boiler

Condition Number	Parameter	Limit & Averaging Period (shall not exceed)	Monitoring & Reporting ¹	Basis for Limit/ Applicable Requirement(s)
2.1	Particulate ² (PM/PM ₁₀)	0.026 gr/dscf @ 7% O ₂ , average of three 1-hour tests.	EPA Method 5 is the reference test method. Sample quarterly consisting of three 1-hour tests using EPA Method 5 or a test method approved in writing by Ecology. Report test results quarterly.	WAC 173-400-114(2)
2.2	Particulate ² (PM/PM ₁₀)	77 tons/year, 12-month rolling annual average	EPA Method 5 is the reference test method. Annual average value is calculated using actual emissions from the most recent stack test results from Condition 2.1 above. Report test results monthly.	WAC 173-400-112(5) State BACT avoidance limit. Limits PM/PM ₁₀ to past actual emissions.
2.3	Visible Emissions ²	Minimum operating condition	Conduct daily visual emissions observation to verify that visible emissions are less than 20%. ³ If visible emissions are greater than 20%, Boise shall within 24 hours initiate corrective action to reduce visible emissions. Failure to initiate corrective action within 24 hours is a violation of WAC 173-405-040(10) and may be a violation of the underlying applicable requirement. Document and report any excursion and corrective actions monthly.	WAC 173-400-070(2)(a)
2.4	SO ₂ ⁴	102 tons/year, 12-month rolling annual average	The Permittee shall record time of combustion of low-volume high-concentration (LVHC) non-condensable gas (NCG). The combustion shall not exceed 1,200 hours per year. Report the hours of combustion with semi-annual MACT reporting requirements.	State BACT limit
2.5	Operation	Minimum operating condition for bypassing ESP when firing natural gas exclusively	Maintain ESP bypass valves in closed conditions during wood waste firing. Monitor and record the positions of ESP bypass valves at all times. Report monthly all bypass periods and the type of fuel fired during bypass period.	

¹ Monitoring is required only when emission unit is operating.

² The approval condition listed in this permit supersedes any existing conditions listed in the previous permits.

³ Visual emissions observation is defined according to the Glossary of Terms at the end of this order.

⁴ This SO₂ requirement is not already covered by the PSD approval order because the proposed project is not subject to PSD review due to no overall SO₂ emissions increase.

Appendix B

Excerpt from the original application for Order DE 02AQIS-3588 showing derivation of the annual SO₂ limit (i.e., 102 tpy) based on the year 2000 total unbleached pulp production, an assumed 50 operational days of NCG combustion in the Hog Fuel Boiler, and NCASI emission factors:

Predicted SO₂ Emissions From the Hog Fuel Boiler- NCG

This spreadsheet calculates the Total Reduced Sulfur (TRS) from the pulping production using NCASI data, then calculates the SO₂ emissions from the Hog Fuel Boiler (HFB) as the result of the TRS combustion. Source: NCASI Technical Bulletin No. 701, Table 6, LVHC NCGs (Pulping & Evaporator Gases Only)

NCASI Data				Average of Average	Formula	MW	Moles of Pollutant	SO ₂ eqv	SO ₂ emitted from HFB	
TRS	Mill Code	Range								Average
		lb/ADTUBP		lb/ADTUBP	lb/ADTUBP	lb/lb-mol	mol/ADTUBP	mole	mol/ADTUBP	
Dimethyl Disulfide	NCGD NCGMM	0.08	0.12	1.00E-01 1	5.50E-01	C2H6S2	94	5.85E-03	2	1.17E-02
Dimethyl Sulfide	NCGB NCGD NCGMM	1.3 1.2	4.8 1.7	2.7 1.4 1.6	1.9	C2H6S	62	3.06E-02	1	3.06E-02
Hydrogen Sulfide	NCGB NCGC	ND ND	0.02 1.50E-03	1.20E-02 1.50E-03	6.75E-03	H2S	34	1.99E-04	1	1.99E-04
Methyl Mercaptan	NCGB NCGD NCGMM	0.18 ND	7.40E-01 2.20E-03	4.10E-01 1.10E-03 1.50E+00	6.37E-01	CH4S	48	1.33E-02	1	1.33E-02
TOTAL	Total SO ₂ (mol/ADTUBP) =								5.58E-02	

Operational Data

2000 UBP Total Production	416701	ADT/yr
Days of Operation	50	days/yr

Calculated Emissions:

SO ₂ MW (lb/lb-mol) =	64
SO ₂ emission factor for HFB (lb/ADTUBP) =	3.57
SO ₂ emitted from HFB (lb/hr) =	169.9
SO ₂ emitted from HFB (lb/yr) =	203916
SO ₂ emitted from HFB (tpy) =	101.96

Appendix C

Summary of annual Hog Fuel Boiler NCG combustion hours, actual total annual virgin pulp production during Hog Fuel Boiler NCG combustion, actual annual SO₂ emissions based on pulp production and the SO₂ emission factor (i.e., 3.57 lb/ADTUBP) used in the original Order application as shown in Appendix B, and comparison of extrapolated actual SO₂ emissions at 1,200 hours Hog Fuel Boiler NCG combustion compared to the permit limit:

Operating Year	Total Annual NCG Combustion in the Hog Fuel Boiler (hours)	Total Annual Virgin Pulp Production during Hog Fuel Boiler NCG Combustion (ADTUBP)	Total Annual SO ₂ Emissions Using Permit Emission Factor 3.57 lb/ADTUBP (tpy)	Annual SO ₂ Emission Rate (tph) ^a	Extrapolated Annual SO ₂ Emissions at 1,200 Hours NCG Combustion Using Annual Emission Rate (tons)	Permit Limit for SO ₂ Emissions - 1,200 Hours NCG Combustion Basis (tpy)	Annual SO ₂ Emissions Difference Using Proposed Emission Factor at 1,200 Hours NCG Combustion (tons)
2017	630	7844	14	0.022	27	102	-75
2018	1323	8699	16	0.012	15	102	-87
2019	193	5818	10	0.052	62	102	-40
2020	631	23863	43	0.068	82	102	-20
2021	463	14430	26	0.056	67	102	-35

^aThe assumed SO₂ emission rate in the Order application is 0.085 tph (102 tpy ÷ 1,200 hours per year)