



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 30, 2019

Mimi Falcon  
Nippon Dynawave Packaging Company, LLC  
P.O. Box 188  
Longview, Washington 98632

**Re: Notice of Construction (NOC) Order No. 16181 and Air Operating Permit (AOP) No. 0000124 Modification**

Dear Mimi Falcon:

Please find enclosed the Notice of Construction (NOC) Order No. 16181 and Air Operating Permit (AOP) No. 0000124 Modification. This NOC Order revises emission limits at the extruder operation. The AOP Modification incorporates the revised extruders emission limits and updates the requirements of 40 CFR 63 Subpart MM. Also enclosed is a copy of the Support Document for the AOP Modification.

The NOC Order and AOP Modification have gone through a 30-day public comment period. The Environmental Protection Agency (EPA) has also had the opportunity to review the AOP Modification and has not provided comments.

Per WAC 173-401-735 (Permit Appeal Provision), you have a right to appeal this NOC Order and/or AOP Modification to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this NOC Order and AOP Modification. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of receipt of this NOC Order and AOP Modification:

- File your appeal and a copy of this NOC Order and/or AOP Modification with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this NOC Order and/or AOP Modification on Ecology in paper form – by mail or in person (see address below). Email is not accepted. You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**Department of Ecology**

Physical Address:  
Attn: Appeals Processing Desk  
300 Desmond Drive SE  
Lacey, WA 98503

Mailing Address:  
Attn: Appeals Processing Desk  
PO Box 47608  
Olympia, WA 98504-7608



**Pollution Control Hearings Board**

Physical Address:  
1111 Israel Rd SW Ste 301  
Tumwater, WA 98501

Mailing Address:  
PO Box 40903  
Olympia, WA 98504-0903

In addition, please send a copy of your appeal to:

Kelsey Holbrook  
Department of Ecology  
PO Box 47600  
Olympia, WA 98504

**Petition EPA**

The EPA's petition period for this AOP Modification is 60 days after the expiration of EPA's 45-day review period. Their 45 day review of the draft AOP Modification, including the NOC Order and response to comments, was July 22 through September 5, 2019. During this time, the EPA did not object to the AOP Modification.

If you believe the EPA should have objected, you can petition the EPA. A petition must be based on one or both of these criteria:

- Comments made during the comment period, or
- A change Ecology made to the permit after the comment period closed.

To petition the EPA, send the petition by mail or email to:

Kelly McFadden  
Manager, Station Source Unit  
US Environmental Protection Agency  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101  
mcfadden.kelly@epa.gov

If you have any questions regarding this letter or the content of this NOC Order and/or AOP Modification please contact Kelsey Holbrook at (360) 407-6355 or kelsey.holbrook@ecy.wa.gov.

Sincerely,



James DeMay, P.E.  
Industrial Section  
Solid Waste Management Program

Enclosures

By certified mail: [9489-0090-0027-6066-9323-81]

cc: Steve Mackey  
Greg Bean  
Brian Wood  
Doug Hardesty, EPA

WASHINGTON DEPARTMENT OF ECOLOGY  
MAIL STOP 47600  
OLYMPIA, WASHINGTON 98504

IN THE MATTER OF AIR EMISSIONS FROM:

Andrew Cooper

NOC ORDER No. 16181

Nippon Dynawave Packaging Company, LLC

P.O. Box 188

Longview, Washington 98632

## DESCRIPTION

Nippon Dynawave Packaging Company, LLC (Nippon Dynawave) owns and operates a Kraft pulp and liquid packaging paperboard mill located in Longview, Washington along the Columbia River. Paperboard is coated with extruded polymer material on both sides and is used for liquid packaging.

The extruder process has been operated at the Longview site since 1963 and has had multiple owners and operators. In 2010 Weyerhaeuser NR Company (Weyerhaeuser) purchased the extruders operation from Pacific Lamination. In 2016 Weyerhaeuser sold the Kraft pulp and paper mill, including the extruders operation, to Nippon Paper Industries, and the facility is now operated under the name Nippon Dynawave Packaging Company, LLC.

The extruder process consists of two extrusion lines, Lines 6 and 7. Each line has a pre-treatment burner which oxidizes the paperboard to promote adhesion of polymers. Following pre-treatment the paperboard is coated through the extrusion process on both sides of the paperboard. Matte coating is applied to the liquid product surface and gloss coating is applied to the exterior printed surface. Following coating, the paperboard is treated to reduce gloss and prepare the outer surface for printing using a Corona Treater.

The Line 6 pre-treatment burner was installed in 1963 and is natural gas-fired. The burner system consists of two burners with a total capacity of 3.06 MMBtu/hr and is exhausted through an 18-inch diameter stack.

The Line 7 pre-treatment burner was installed in 1977, with a complete control upgrade in 2013, and is natural gas-fired. The burner system consists of two burners with a total capacity of 3.06 MMBtu/hr and is exhausted through an 18-inch diameter stack.

Design and operating specifications for each of the extruders is included in Table 1 below. Extruder 6.2 has a coalescing fiber bed mist collection system which was installed in 2008 to reduce visible emissions. The other extruders do not have add-on control technology.

**Table 1. Extruder Design and Operating Specifications**

<b>Extruder</b>	<b>Installation Year</b>	<b>Surface Coating Type</b>	<b>Coating Material</b>	<b>Maximum Throughput (lbs/hr)</b>	<b>Maximum Exposed Melting Surface (ft<sup>2</sup>)</b>
6.1	1963	Matte	Low-density polyethylene (LDPE)	2,750	8.677
6.2	1963	Gloss	LDPE	2,750	8.677
6.3A, B, C	2002	Matte	6.3A: LDPE 6.3B: Nylon 6.3C: Tie Resin or LDPE	6.3A: 2,750 6.3B: 1,300 6.3C: 1,100 Total: 5,150	10.743 (total)
7.1/7.1A	7.1: 1977 7.1A: 1994	Matte	LDPE	7.1: 2,600 7.1A: 1,300 Total: 3,900	11.569
7.2	1977	Gloss	LDPE	2,600	11.569

The Line 6 Corona Treater was installed in 2002, with an additional treater added in 2005. The corona discharge post-treatment unit oxidizes the coated paperboard to allow for printing on the gloss-side. This process results in ozone emissions.

The Line 7 Corona Treater which is currently in use was installed in 2006 and has the same capacity as the unit it replaced.

In addition to the equipment mentioned above, the extruders operation also includes a poly pellet transport system (which includes a poly dust collection system), a vacuum system, and a core cutting room. The pellet transport process moves pellets of polymeric coating from rail cars to storage silos using a pneumatic system. The pellets first travel from railcars to a receiver which exhausts the transport air to atmosphere. They are then transported to an elutriator, which separates poly dust and ‘angel hair’ from the polymeric pellets. The pellets are then sent to the storage silos, while the separated dust and debris are sent to a baghouse to collect the dust for disposal.

The vacuum system is used to collect particulate from the core saw room and for general shop maintenance. Exhaust air flows through a cyclone and a baghouse to remove particulate matter. Rolls of paperboard are cut in the core cutting room to ideal lengths. The vacuum system collects the majority of the particulate matter generated during this; however, a small amount of particulate can escape the vacuum system. An exhaust system was installed in the core cutting room to prevent particulate from escaping the room and potentially migrating onto the product.

Prior to 2010, when the extruders operation was sold to Weyerhaeuser and became part of the Kraft pulp mill, this operation was under the permitting jurisdiction of Southwest Clean Air Agency (SWCAA). A brief description of the permits issued by SWCAA for this operation is included in Appendix C.

SWCAA 09-2849 requires the facility, now Nippon Dynawave, to conduct stack testing once every five years for a specified extruder. In accordance with SWCAA 09-2849, Nippon Dynawave completed a stack test at Extruder 7.1/7.1A on May 17, 2018. Results of the stack test indicated that the VOC emissions from Extruder 7.1/7.1A were above the permitted limit. In response to a Compliance Order (Docket Number 15893) issued by the Washington State Department of Ecology (Ecology) on August 8, 2018, Nippon Dynawave conducted additional source tests at each of the operating extruders in September 2018. Results of the source testing conducted in May and September 2018 are included in Table 2 below.

**Table 2. Source Testing Results from May and September 2018 for Extruders Operation**

Test Date	Extruder	PM (lbs/hr)	VOCs (lbs/hr)	Opacity	Polymer Usage (lbs/hr)	Volumetric Flow Rate (dscfm)
September 18, 2018	6.2	0.098	1.0	0%	1,463	4,780
September 19, 2018	6.3A, B, C	0.15	0.4	1%	3,909	3,952
May 17, 2018	7.1/7.1A	0.88	1.4	0%	3,598	7,763
September 20, 2018	7.1/7.1A	0.47	1.3	2%	3,802	7,882
September 21, 2018	7.2	0.36	1.0	3%	2,038	8,201

Based on the results of the testing, Nippon Dynawave and Ecology have determined that emissions from the extruders operation were not estimated accurately during previous permitting actions. As a result, the limits in those Orders are no longer considered to be reasonably achievable. Compliance Order 15893 required Nippon Dynawave to establish new emission factors for each of the extruders based on the source testing completed in May and September 2018. The emission limits for all of the extruders, including the facility-wide emission limits, will be modified based on the new emission factors.

## **FINDINGS**

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110, 173-400-111 and 173-460-040, and based upon the complete NOC Modification Application submitted by Nippon Dynawave and the technical analysis performed by Ecology, Ecology now finds the following:

1. An initial NOC modification application received January 2, 2019 was submitted by Nippon Dynawave for the modification of the Extruders Air Discharge Permit issued by SWCAA.

Ecology reviewed the initial application and additional information provided by Nippon Dynawave on February 1, 2019 and found it complete per WAC 173-400-111 on March 5, 2019.

- Emission estimates for the Extruders Operation for criteria air pollutants are included in Table 3 below.

**Table 3. Estimated Emissions of Criteria Air Pollutants from the Extruders Operation**

Source	Pollutant	Estimated Emissions (lbs/hr)	Estimated Emissions (tons/yr)
Lines 6 and 7 Pre-Treatment Burners	VOC	0.066	0.29
Lines 6 and 7 Pre-Treatment Burners	NO <sub>x</sub>	1.2	5.26
Lines 6 and 7 Pre-Treatment Burners	CO	1.01	4.42
Lines 6 and 7 Pre-Treatment Burners	PM <sub>10</sub>	0.09	0.40
Lines 6 and 7 Pre-Treatment Burners	SO <sub>2</sub>	0.017	0.075
Pellet Transport System	PM <sub>10</sub>	0.03	0.1185
Poly Dust Collector	PM <sub>10</sub>	0.12	0.1795
Vacuum System	PM <sub>10</sub>	0.12	0.507
Extruder 6.1	VOC	1.3	4.4
Extruder 6.1	PM <sub>10</sub>	1.2	5.1
Extruder 6.2	VOC	2.3	6.8
Extruder 6.2	PM <sub>10</sub>	1.2	5.1
Extruder 6.3A, B, C	VOC	2.5	8.3
Extruder 6.3A, B, C	PM <sub>10</sub>	1.6	3.5
Extruder 7.1/7.1A	VOC	1.9	6.3
Extruder 7.1/7.1A	PM <sub>10</sub>	1.2	4.0
Extruder 7.2	VOC	1.6	5.1
Extruder 7.2	PM <sub>10</sub>	2.0	8.7
All Extruders	CO	--	1.35
Lines 6 and 7 Corona Treaters	Ozone	0.042	0.313
Core Cutting Room Exhaust	PM	0.04	0.219
Facility-wide	VOC	--	22.1
Facility-wide	NO <sub>x</sub>	--	5.26
Facility-wide	CO	--	5.77
Facility-wide	PM	--	17.5
Facility-wide	PM <sub>10</sub>	--	17.5
Facility-wide	PM <sub>2.5</sub>	--	17.5
Facility-wide	SO <sub>2</sub>	--	0.08
Facility-wide	Ozone	--	0.31

3. Emissions of toxic air pollutants (TAPs), as defined in Chapter 173-460 WAC, have been estimated using emission factors from a source test conducted at a similar facility and from a source test conducted in 1999 at the extruders operation. Emission estimates for TAPs are included in Table 4 below.

**Table 4. Estimated Emissions of TAPs from the Extruders Operation**

Pollutant	Averaging Period	Estimated Emissions (lbs/avg. period)
Acetaldehyde	Annual	475
Acrolein	24-hr	0.016
Formaldehyde	Annual	869
Methyl Ethyl Ketone (MEK)	24-hr	1.17
Propylene	24-hr	0.085
Acrylic Acid	24-hr	0.002
Toluene	24-hr	0.996

4. In accordance with the application, the emission limits for PM<sub>10</sub> and VOC will be modified facility-wide and for the following specific units: Extruder 6.1, Extruder 6.2, Extruder 6.3A, B, and C, Extruder 7.1/7.1A, and Extruder 7.2.

Facility-wide emission limits and emission limits for Extruder 6.1, Extruder 6.2 (hourly limit only), Extruder 6.3A, B, and C, Extruder 7.1/7.1A, and Extruder 7.2 for VOC will increase. Emission limits for Extruder 7.1/7.1A (hourly limit only) and Extruder 6.3A, B, and C for PM<sub>10</sub> will increase. The annual VOC limit for Extruder 6.2 will decrease. Specific modifications to the emission limits for each extruder, and facility-wide, are included in Table 5 below.

**Table 5. Proposed Modifications to Emission Limits**

Extruder	Pollutant	Permit Limit Change (lbs/hr)	Permit Limit Change (tons/yr)
6.1	VOC	0.7	2.0
6.1	PM <sub>10</sub>	No change	No change
6.2	VOC	0.7	-0.1
6.2	PM <sub>10</sub>	No change	No change
6.3A, B, C	VOC	1.6	5.3
6.3A, B, C	PM <sub>10</sub>	0.7	0.5
7.1/7.1A	VOC	0.9	2.3
7.1/7.1A	PM <sub>10</sub>	0.2	No change
7.2	VOC	0.6	1.0
7.2	PM <sub>10</sub>	No change	No change
Facility-wide	VOC	N/A	9.0
Facility-wide	PM <sub>10</sub>	N/A	No change

5. The facility has the potential to emit greater than 100 tpy for at least one PSD pollutant. The facility is therefore classified as a major stationary source under the PSD permitting program, and is, therefore, subject to PSD permitting consideration under WAC 173-400-720 and 40 CFR 52.21, in accordance with 40 CFR 52.21(2)(i). Because this permitting action is not a result of a modification of an existing source or the construction of a new source, PSD permitting is not required for this permit modification.
6. In accordance with WAC 173-400-111(8), in order to approve the request to modify the existing Order, the change in conditions must continue to meet the following criteria:
  - a. The change in conditions will not cause the source to exceed an emissions standard set by regulation or rule.
  - b. The change in conditions will not cause or contribute to a violation of any ambient air quality standards.
  - c. The change will not adversely impact the ability of the permitting authority to determine compliance with an emissions standard.
  - d. The revised order will continue to require best achievable control technology (BACT) for each new source approved by the order.
  - e. The revised order meets the requirements of WAC 173-400-111, 173-400-112, 173-400-113, 173-400-720, 173-400-830, and 173-460-040, as applicable.

Each of these criteria are discussed in detail below.

7. With respect to applicable emission standards, which are discussed on page 5 of the application:
  - a. The extruders operation is subject to 40 CFR Part 63, Subpart JJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAP): Paper and Other Web Coating. Nippon Dynawave will continue to comply with the requirements of 40 CFR Part 63, Subpart JJJJ.
  - b. No other applicable emission standards have been identified for the extruders operation.
8. This modified Order will not result in a violation of any ambient air quality standards. The modification will increase the annual VOC limit by 9.0 tons per year and the hourly VOC limit by 4.5 pounds per hour. No ambient air quality standards have been established for VOC; therefore, the increase in the VOC limits will not cause or contribute to a violation of the ambient air quality standards.



The modified Order increases the hourly PM<sub>10</sub> limit by 0.7 pounds per hour at Extruder 6.3A, B, and C and 0.2 pounds per hour at Extruder 7.1/7.1A, resulting in a total increase of 0.9 pounds per hour. The annual PM<sub>10</sub> limit for the facility will not change. WAC 173-400-113 includes threshold values to determine if an emissions increase will cause or contribute to a violation of an ambient air quality standard. For PM<sub>10</sub> the threshold value for the annual average impact is 1.0 µg/m<sup>3</sup> and for the 24-hour average impact is 5 µg/m<sup>3</sup>. Because the annual PM<sub>10</sub> limit for the facility will not change, this permit modification is not expected to cause or contribute to a violation of the ambient air quality standards.

9. The modified Order will not result in any changes to monitoring or reporting requirements. No impacts to compliance determinations for the source are expected due to the permit modification.
10. The revised order will continue to require BACT, as previously established, for the following units: Core Cutting Room Exhaust, Line 7 Corona Treater, Line 6 Corona Treater, Extruder 6.3, Extruder 7.1/7.1A, and the Poly Dust Collector System. Reasonably available control technology (RACT) determinations have previously been made for Extruders 6.1, 6.2, and 7.2. Previous BACT and RACT determinations are described below:
  - a. Core Cutting Room Exhaust – BACT determined to be operating with no add-on controls
  - b. Line 7 Corona Treater – BACT determined to be operating with no add-on controls
  - c. Line 6 Corona Treater – BACT determined to be operating with no add-on controls
  - d. Extruder 6.3A, B, and C – BACT for CO determined to be operating with no add-on controls. BACT for PM<sub>10</sub> was determined to be the use of a coalescing filter system if emissions of PM<sub>10</sub> exceed 3.0 tons per year. Rather than requiring the installation of the coalescing filter system, the permitting authority limited the annual PM<sub>10</sub> emissions for Extruder 6.3 to 3.0 tons per year. Based on this historical BACT determination, the annual PM<sub>10</sub> emissions at Extruder 6.3A, B, and C will be limited to 3.0 tons per year.
  - e. Extruder 7.1/7.1A – BACT for PM<sub>10</sub> was determined to be the use of a coalescing filter system if emission of PM<sub>10</sub> exceed 4.0 tons per year. Rather than requiring the installation of the coalescing filter system, the permitting authority limited the annual PM<sub>10</sub> emissions for Extruder 7.1/7.1A to 4.0 tons per year.
  - f. Poly Dust Collector – BACT was determined to be the use of a baghouse.
  - g. RACT determinations for Extruder 6.1, Extruder 6.2, and Extruder 7.2 – Limits were established for each of the extruders for VOC, PM<sub>10</sub>, and opacity based on the limits established for Extruder 7.1/7.1A and Extruder 6.3A, B, and C.

- h. Extruder 6.2 – RACT was determined to be the use of a coalescing filter system.
11. WAC 173-460-040 applies to new or modified toxic air pollutant sources, as defined in WAC 173-460-020(6). This Order modification will not result in a new or modified toxic air pollutant source.
  12. An environmental checklist was submitted with the NOC Modification Application which considered environmental impacts of the increased permit limits as required by chapter 43.21C of the Revised Code of Washington (RCW), also known as the State Environmental Policy Act (SEPA). Ecology reviewed the checklist and made a Determination of Nonsignificance (DNS) which was signed on June 10, 2019 and made available for public comment at the same time as the order.
  13. The proposed project meets all applicable federal and state rules and regulations implemented by Ecology including: General Regulations for Air Pollution Sources (Chapter 173-400 WAC), New Source Performance Standards (40 CFR Part 60 and 40 CFR Part 61) and National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63).

THEREFORE, it is ordered that the project, as described in said NOC permit application and other information submitted to the Ecology in reference thereto, is approved subject to the conditions listed below.

## CONDITIONS

1. This order supersedes SWCAA 09-2849 in its entirety.
2. Nippon Dynawave must comply with the following limits included in Table 6 for each of the specified emission units:

**Table 6. Emission Limits for the Extruders Operation**

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Limit</b>
Extruder 6.1	PM <sub>10</sub>	1.2 pounds per hour (lbs/hr) 5.1 tons per year (tpy)
Extruder 6.1	VOC	1.3 lbs/hr 4.4 tpy
Extruder 6.2	PM <sub>10</sub>	1.2 lbs/hr 5.1 tpy
Extruder 6.2	VOC	2.3 lbs/hr 6.8 tpy
Extruder 6.3A, B, and C (combined)	PM <sub>10</sub>	1.6 lbs/hr 3.0 tpy
Extruder 6.3A, B, and C (combined)	VOC	2.5 lbs/hr 8.5 tpy
Extruder 7.1/7.1A (combined)	PM <sub>10</sub>	1.2 lbs/hr 4.0 tpy

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Limit</b>
Extruder 7.1/7.1A (combined)	VOC	1.9 lbs/hr 6.3 tpy
Extruder 7.2	PM <sub>10</sub>	2.0 lbs/hr 8.7 tpy
Extruder 7.2	VOC	1.6 lbs/hr 5.1 tpy
Line 7 Corona Treater	Ozone	313 pounds per year (lbs/yr)
Poly Dust Collector Baghouse	PM <sub>10</sub>	0.005 grains per dry standard cubic foot (gr/dscf) 0.2 lbs/hr 0.2 tpy
Poly Dust Collector Baghouse	Opacity	0% for more than 3 minutes in any 1 hour period, as determined in accordance with Ecology Method 9A
Core Cutting Room Exhaust	PM <sub>10</sub>	0.005 gr/dscf 0.2 lbs/hr 0.2 tpy
Core Cutting Room Exhaust	PM <sub>2.5</sub>	0.005 gr/dscf 0.2 lbs/hr 0.2 tpy
Facility-wide (extruders operation)	PM <sub>10</sub>	17.5 tpy
Facility-wide (extruders operation)	VOC	22.1 tpy

3. Annual emissions shall be calculated using the approved emission factors included in Appendix B of this Order unless alternative emission factors are developed and approved by the permitting authority.
4. The following information shall be recorded each calendar month:
  - a. The total quantity of polymeric coating applied by each extruder.
  - b. The total amount of natural gas consumed by the Line 6 and Line 7 pre-treatment burners.
  - c. The total number of hours each corona treater was operated.
  - d. The total number of hours the pellet transport system was operated.
  - e. The total number of hours the vacuum system was operated.
  - f. The total number of hours the Core Cutting Room Exhaust was operated.

- g. Any maintenance activities or upset conditions which resulted in increased emissions.
5. Source testing of one extruder exhaust shall be conducted no later than September every five years, beginning September 2023, unless an alternative schedule is approved by the permitting authority. All source emissions testing shall be conducted in accordance with Appendix A of this Order.

The results of source testing shall be reported to the permitting authority no later than 60 days following completion of the testing.

6. Visual emissions (opacity) monitoring of each extruder exhaust shall be conducted at least once every twelve months in accordance with Appendix A of this Order.

The results of opacity monitoring shall be reported to the permitting authority no later than 60 days following completion of the monitoring.

7. Annual emissions must be reported to the permitting authority by March 15<sup>th</sup> of each year for the previous calendar year. The following information must be included in the report:
- a. The total quantity of polymeric coating applied by each extruder.
  - b. The total amount of natural gas consumed by the Line 6 and Line 7 pre-treatment burners.
  - c. The total number of hours each corona treater was operated.
  - d. The total number of hours the pellet transport system was operated.
  - e. The total number of hours the vacuum system was operated.
  - f. The total number of hours the Core Cutting Room Exhaust was operated.
  - g. Air emissions of criteria air pollutants, VOCs, TAPs, and HAPs from each emission unit and facility-wide for the Extruders Operation.
8. All records required by this Order shall be maintained and made readily available upon request of the permitting authority for a minimum of five years.
9. Extruder 6.1 is not currently being operated regularly. Prior to returning Extruder 6.1 to regular operation, Nippon Dynawave must notify the permitting authority as soon as possible, but no later than 30 days prior to resuming regular operation of Extruder 6.1.
10. The Extruders Operation and the associated air pollution control equipment and monitoring equipment must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times.

11. Any activity or operation, which is undertaken by Nippon Dynawave or others, in a manner which is inconsistent with the notice of construction modification application received by Ecology on January 2, 2019, other information submitted to Ecology in reference thereto, and this Order, shall be subject to Ecology enforcement under applicable regulation. Nothing in this order shall be construed so as to relieve Nippon Dynawave of its obligations under any state, local, or federal laws or regulations.

### **YOUR RIGHT TO APPEAL**

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

### **ADDRESS AND LOCATION INFORMATION**

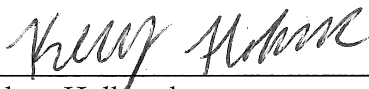
<b>Street Addresses</b>	<b>Mailing Addresses</b>
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel Road SW STE 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903

**MORE INFORMATION**

- **Pollution Control Hearings Board**  
[www.eho.wa.gov/Boards\\_PCHB.aspx](http://www.eho.wa.gov/Boards_PCHB.aspx)
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**  
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 70.94 RCW, Washington Clean Air Act**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94>
- **Air Quality Rules**  
<https://ecology.wa.gov/Air-Climate/Air-quality/Business-industry-requirements/Permits-for-burning-industrial>

**SIGNATURES**

Reviewed by:



Kelsey Holbrook  
Environmental Engineer  
Solid Waste Management Program



James DeMay, P.E.  
Industrial Section Manager  
Solid Waste Management Program

9/30/2019

Date

9/30/19

Date

## Appendix A Emission Testing Requirements

The purpose of this testing is to quantify VOC and PM emissions and the opacity of emissions from the extruders and to demonstrate compliance with the requirements of this Order. If testing indicates that the currently approved emission factors are no longer accurate, new emission factors may be developed based on the results of the testing.

Source testing of one extruder exhaust shall be conducted no later than September every five years, beginning September 2023, unless an alternative schedule is approved by the permitting authority. The extruder exhausts shall be tested on a rotating schedule so that each extruder exhaust is tested at the same frequency. The schedule below shall be utilized unless an alternative schedule is approved by the permitting authority.

<b>Emission Unit</b>	<b>Testing Date</b>
Extruder 7.2	September 2023
Extruder 6.3A, B, C	September 2028
Extruder 6.2	September 2033
Extruder 6.1	September 2038
Extruder 7.1/7.1A	September 2043

A comprehensive testing plan must be submitted to the permitting authority for review and approval at least 30 days prior to the scheduled testing date. Each test shall consist of three sampling runs using the methods and test durations specified below:

<b>Constituent</b>	<b>Test Method or Equivalent <sup>1</sup></b>	<b>Minimum Test Duration</b>
Stack gas flow rate, Temperature	EPA Methods 1 and 2	N/A
O <sub>2</sub> , CO <sub>2</sub> Content	EPA Method 3 or 3A	60 minutes
Stack gas moisture content	EPA Method 4	60 minutes
Filterable particulate matter <sup>1</sup>	EPA Method 5 or 201A	60 minutes
Opacity	Ecology Method 9A	60 minutes
Total VOCs	EPA Method 18/25A	60 minutes
Condensable particulate matter	EPA Method 202	60 minutes

<sup>1</sup> All particulate matter will be assumed to be PM<sub>10</sub> unless otherwise demonstrated.

Opacity monitoring shall be conducted for each extruder exhaust stack at least once every 12 calendar months, no later than the end of September. Each stack shall be monitored in accordance with Ecology Method 9A.

A complete record of production related parameters including but not limited to the following shall be kept during emissions testing to correlate operations with emissions, and shall be included with each final test report:

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1. Process startups, shutdowns, and upsets
2. Polymer use rate
3. Polymer type
4. Adjustments to operating conditions

Source operations during the emission test must be representative of the maximum level of normal operation.

A final emission test report shall be prepared and submitting to the permitting authority within 60 calendar days of test completion and, at a minimum, shall contain the following information:

1. Description of the source including manufacturer, model number, and design capacity of the equipment, and the location of the sample ports or test locations.
2. Time and date of the test and identification and qualifications of the personnel involved.
3. Summary of results, reported in units and averaging periods consistent with the applicable emissions standard or unit.
4. Summary of control system or equipment operating conditions.
5. Summary of production related parameters.
6. A description of the test methods or procedures used, including all field data, quality assurance/quality control procedures, and documentation.
7. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures, and documentation.
8. Copies of field data and example calculations.
9. Chain of custody information.
10. Calibration documentation.
11. Discussion of any abnormalities associated with the results.
12. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.



## Appendix B Approved Emission Factors

Annual emissions shall be calculated using the following approved emission factors unless alternative emission factors are approved by the permitting authority.

Emission Unit(s)	Pollutant	Emission Factor
Extruder 6.1 Extruder 6.3A, B, C Extruder 7.1/7.1A	PM <sub>10</sub>	184 lb/MMlb polymeric coating applied
Extruder 6.1 Extruder 6.3A, B, C Extruder 7.1/7.1A	VOC	368 lb/MMlb polymeric coating applied
Extruder 6.2	PM <sub>10</sub>	67 lb/MMlb polymeric coating applied
Extruder 6.2	VOC	565 lb/MMlb polymeric coating applied
Extruder 7.2	PM <sub>10</sub>	213 lb/MMlb polymeric coating applied
Extruder 7.2	VOC	446 lb/MMlb polymeric coating applied
All Extruders	CO	22 lb/MMlb polymeric coating applied
All Extruders	Acetaldehyde	4.43 lb/MMlb polymeric coating applied
All Extruders	Acrolein	0.07 lb/MMlb polymeric coating applied
All Extruders	Formaldehyde	8.11 lb/MMlb polymeric coating applied
All Extruders	Methyl Ethyl Ketone (MEK)	5.25 lb/MMlb polymeric coating applied
All Extruders	Propylene	0.38 lb/MMlb polymeric coating applied
All Extruders	Acrylic Acid	0.01 lb/MMlb polymeric coating applied
All Extruders	Toluene	4.47 lb/MMlb polymeric coating applied

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Emission Unit(s)	Pollutant	Emission Factor
Line 6 and Line 7 Corona Treaters	Ozone	0.021 lb/hour of operation
Poly Dust Collector	PM <sub>10</sub> PM <sub>2.5</sub>	0.12 lb/hour of operation
Core Cutting Room Exhaust	PM	0.05 lb/hour of operation
Pellet Transport System	PM <sub>10</sub>	0.03 lb/hour of operation
Vacuum System	PM <sub>10</sub>	0.12 lb/hour of operation
Line 6 and Line 7 pre-treatment burners	VOCs	5.5 lb/MMscf natural gas consumed
Line 6 and Line 7 pre-treatment burners	NO <sub>x</sub>	100 lb/MMscf natural gas consumed
Line 6 and Line 7 pre-treatment burners	CO	84 lb/MMscf natural gas consumed
Line 6 and Line 7 pre-treatment burners	PM <sub>10</sub>	7.6 lb/MMscf
Line 6 and Line 7 pre-treatment burners	SO <sub>2</sub>	1.43 lb/MMscf

## **Appendix C**

### **Permitting History for the Extruders Operation**

Prior to 2010, when the extruders operation was sold to Weyerhaeuser and became part of the Kraft pulp mill, this operation was under the permitting jurisdiction of Southwest Clean Air Agency (SWCAA), previously named Southwest Air Pollution Control Agency (SWAPCA). SWCAA issued numerous permits for the operation.

A brief description of the permits issued by SWCAA for this operation is included below:

- SWAPCA 78-294 was issued on January 4, 1978, approving the installation and operation of product sizing, trimming, and conveying of coated paper board.
- SWAPCA 78-302 was issued on January 16, 1978, approving the installation and operation of one polyethylene coating line, consisting of two pre-treatment burners, two extruders, one post-treatment electrostatic device, and ventilation systems for the line.
- SWAPCA 78-315 was issued on February 2, 1978, approving the installation and operation of a pneumatic conveying system and dry filtration system.
- SWAPCA 94-1699 was issued on December 30, 1994, approving modifications to the extrusion coating process, including the addition of Extruder 7.1A. This order established the first emission limits and testing requirements for the operation. Limits were established for VOCs, Ozone, NO<sub>x</sub>, CO, TAPs, Opacity, and fine particulates for Extruder 7.1/7.1A.
- SWAPCA 94-1699R1 was issued on July 7, 2000, and approving modifications to equipment configurations and modifying emission limits at Extruder 7.1/7.1A. Source testing at Extruder 7.1/7.1A indicated that the facility was above the permitted limit for fine particulates. The fine particulate emission limit was increased. This permit was a modification to the previously issued permit (SWAPCA 94-1699).
- SWCAA 02-2430 was issued on October 11, 2002, approving the installation of a new extruder machine (Extruder 6.3) and the poly dust collector system. This permit also consolidated all of the previously issued permits into a single permit, effectively superseding SWAPCA 78-294, SWAPCA 78-302, SWAPCA 78-315, and SWAPCA 94-1699R1 in their entirety. Limits were established for Extruders 6.1, 6.2, 6.3, and 7.2 for particulate matter less than 10 micrometers (PM<sub>10</sub>) and VOCs. Limits for Extruder 7.1/7.1A were modified based on new source testing data. Limits were also established for the poly dust collector baghouse for PM<sub>10</sub> and opacity, and facility-wide emission limits were established for PM<sub>10</sub> and VOCs.
- SWCAA 02-2430R1 was a modification to the previously issued permit and was issued on December 7, 2005. The modification approved the installation of a new corona treater on Line 6. There were no changes to the previously permitted emission limits in this modification.

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- SWCAA 02-2430R2 was a modification to the previously issued permit and was issued on May 30, 2006. This modification approved the replacement of the Line 7 corona treatment unit and established ozone limits for the new corona treater. There were no changes to the previously permitted emission limits.
- SWCAA 02-2430R3 was a modification to the previously issued permit and was issued on April 11, 2008. This modification approved the installation and operation of the coalescing filter system to the Extruder 6.2 exhaust. The filter system was installed due to a stack test at Extruder 6.2 indicated VOC emissions above the permitted limit and an opacity of 20%. There were no changes to the previously permitted emission limits.
- SWCAA 09-2849 superseded SWCAA 02-2430R3 and was issued on February 5, 2009. The permit increased the VOC limit for Extruder 6.2 based on source testing indicating emissions above the permitted limit. The existing core cutting room exhaust system was added to the permit and limits were established for the exhaust for PM<sub>10</sub> and particulate matter less than 2.5 micrometers (PM<sub>2.5</sub>). The existing facility-wide PM<sub>10</sub> emission limit was also modified.

**Washington State Department of Ecology  
Response to Public Comment**

**Nippon Dynawave Packaging Company, LLC  
3401 Industrial Way  
Longview, Washington 98632**

**NOC Order No. 16181 and AOP 0000124  
Extruders Operation Permit Modification  
September 30, 2019**

Department of Ecology (Ecology) published notice of an opportunity to comment on the proposed notice of construction (NOC) order and associated modified air operating permit (AOP) in The Daily News on June 10, 2019. The proposed NOC order modification will increase emission limits for PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC at the Nippon Dynawave Packaging Company, LLC's (Nippon Dynawave's) extruders operation. In the notice, Ecology invited public review of the proposed NOC order modification and associated modified AOP and provided a 31-day public comment period. Ecology received written comments from one individual through email.

Ecology carefully reviewed the comment received. During the review Ecology considered whether the comment provided any new facts relevant to the project, or identified any areas where the proposed NOC modification or modified AOP had neglected or misapplied an applicable requirement found in rule or law. No changes were made to the proposed order or AOP. A copy of the final NOC order and modified AOP will be sent to all interested parties upon issuance and posted on the Industrial Section website at <https://fortress.wa.gov/ecy/industrial/UIPermit/NOCPermits.aspx>.

This document includes the comment received, followed by Ecology's response. The comment appears in italicized text, followed by Ecology's response in regular text. Ecology will send a copy of this response to comments to each individual who provided comments.

## **PUBLIC COMMENTS RECEIVED**

### Comment 1 (Donna Dishman):

*This is Public Comment being made re Nippon Dynawave Air Quality Order 16181, which would increase air pollution levels allowed at the Longview, Washington, extruder facility.*

*This is written from the perspective of a citizen residing several miles from this facility; my neighbors, myself, and others in this community continually experience very unhealthy, strong, objectionable chemical and other stench from Nippon which are sickening, often daily, often inside homes and the local hospital, and often waking residents. To give just one example, recently we were unwell from and suffered through over 25 continuous hours of NCGs emitted from the Nippon mill, with such a strong chemical stench that another resident in my area called the Longview Fire Dept and they responded with a fire crew and full truck.*

*This “Notice of Construction Application” asks applicant at VI. EMISSIONS ESTIMATION OF TOXIC AIR POLLUTANTS, Does your project generate toxic air pollutant emissions? Applicant checked NO, however this is not correct and untrue and there are definitely toxins emitted.*

*The Notice of Comment Period, Dept. of Ecology, Project Info, says an increase of pollution would be allowed of VOC, by 4.5 lbs/hr and 19.7 tons per year. NOC Order says the modification will increase the annual VOC limit by 9.0 tons per year and the hourly VOC limit by 4.5 pounds per hour. Which is correct?*

*Emissions of toxic air pollutants as defined in Chapter 173-400 WAC were estimated using very old emission factors, including those conducted twenty years ago. Much more updated data should be used and more often.*

*This document states “source testing of one extruder exhaust shall be conducted no later than September every five years, beginning Sept, 2023 . . . “. This permit should require ANNUAL stack testing of each of the four stacks involved, instead of a rotating schedule involving a very lengthy period between each stack being tested. Ecology was unaware of inaccurately estimated emissions from the extruders until 2018 testing showed emissions above permitted levels.*

*“This modified order will not result in a violation of any ambient air quality standards.”*

*“No ambient air quality standards have been established for VOC; therefore, the increase in the VOC limits will not cause or contribute to a violation of the ambient air quality standards.”*

*How will Ecology know if there is a permit violation? Data will not show this in a timely manner; only after test results become known later.*

*The Notice of Construction Application shows proposed short-term permit limits highlighted. For example, Table 2A, VOC increased limits, an increase from .09/lb hr to 2.5. What is the definition of short-term?*

*My concerns are for the health and quality of life of my family and community members. We currently suffer health issues from constant air pollution emissions and stenches, and there are visible air pollution markings on walkways and sidewalks, etc. miles from area mills which are very difficult to remove with heavy pressure washing. We are breathing very, very unhealthy air.*

*Donna Dishman  
2633 Florida Street  
Longview, Washington 98632*

*Sent from my iPad*

Ecology Response to Comment 1:

Section VI of the Notice of Construction (NOC) Application asks the applicant if the project will generate toxic air pollutant emissions. In this case ‘project’ is the increase in the volatile organic compound (VOC) limit for the Extruders Operation. The project does not include any physical changes to the extruders or a change in the method of operation (such as an increase in hours of operation). The modified limits more accurately reflect the actual emissions from the extruder operations. Therefore, while the Extruders Operation does emit toxic air pollutants, the ‘project’ does not increase toxic air pollutants. Because of this Nippon Dynawave Packaging Company, LLC (Nippon Dynawave) reported that the ‘project’ will not generate toxic air pollutants. Ecology requested that Nippon Dynawave report the expected toxic air pollutant emissions from the Extruders Operation. Nippon Dynawave provided the estimated emissions to Ecology via email. These estimates are included in Table 4 of the NOC order. Ecology did not require Nippon Dynawave to submit a new application.

The modified limits in the NOC order and AOP represent an additional 9.0 tons of VOC emissions on an annual basis from the entire Extruders Operation. The Extruders Operation is comprised of many emission units, including the five extruders. Each extruder has a specific VOC limit, as well as a specific limit for particulate matter less than 10 micrometers (PM<sub>10</sub>). The public notice correctly stated that the hourly emission limits for the five extruders increased by a total of 4.5 pounds, but it is noted that each extruder has different hourly VOC emission limits and increased by varying amounts. Unfortunately, the total annual increase in VOCs was incorrect in the public notice. The correct value is 9.0 tons per year, as determined by the change in the facility-wide emission limit from 13.1 tons per year to 22.1 tons per year (Table 6 of Condition 2 in the modified NOC).

The testing schedule for the extruders has been continued from the previous version of the NOC order. Ecology required Nippon Dynawave to conduct source tests on each of the operating extruders for VOC and PM<sub>10</sub> prior to submitting the NOC application for this modification. The results of that testing were provided on Ecology’s website with the public notice documents as a “support document”. The emissions from the extruders appear to be strongly influenced, if not fully influenced, by operating rates and polymer type.

As such, the use of emission factors for the extruders should be representative of the actual emissions, as long as the operating rates and polymer types are similar to when the source tests were conducted. As described in the application, historic emission factors for the extruders were based on source tests which did not fully capture the emissions from the extruders. Ecology has determined that the updated emission factors, based on the most recent source testing completed at each of the operating extruders, are adequate to determine ongoing compliance with the emission limits. Because of this Ecology has continued the previous testing schedule for the extruders. It is noted that any change in operations from what was submitted in the NOC application (such as operating rates or polymer types) would require a new NOC application and Ecology approval before implementation, if it would result in an increase in emissions.

Ecology has two methods to determine if a specific emission limit at the extruders is violated:

1. Source test data indicates a violation of an emission limit has occurred, or
2. The facility calculates that a violation has occurred based on the approved emission factors.

Nippon Dynawave is required to report to Ecology if a violation of an emission limit has occurred. The hourly emission limits for the extruders apply whenever the unit is operating. Nippon Dynawave is also required to report annual emissions from the extruders operation to Ecology.

The short-term emission rate is an hourly emission rate, as shown by the units of pounds per hour. This phrase is not used in the NOC order; therefore Ecology does not have a definition of “short-term” included in the NOC order.

The extruders operation is not expected to cause or contribute to odors. The extruders are not part of the Kraft pulping process, which is generally where pulp mill odors are generated. This order does not allow an increase in operating rates or capacity, therefore increased pulp production is not expected as a result of this NOC order.

No changes were made to the order in response to this comment.