

ORDER OF APPROVAL
NOTICE OF CONSTRUCTION 23NOC1621
ISSUED to Crown Cork and Seal on
FEB 27 2024

This Order of Approval ("Order") is issued in accordance with Olympic Region Clean Air Agency ("ORCAA") Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6.

Conditional approval to install and operate stationary sources of air pollutant as described in Conditions 1 and 2 of this Order ("Approved Equipment") at 1202 Fones Road SE, in Olympia ("Approved Location"), for operation solely as described in the associated Notice of Construction ("NOC") application Nos. 98NOC021, 00NOC034, 00NOC059, 02NOC273, 08NOC622, 16MOD1178, 17NOC1261, 19NOC1336, 20NOC1451, 20NOC1454, 21NOC1483, 24NOC1613, and 23NOC1621, is hereby GRANTED to Crown Cork and Seal ("Applicant"), subject to the Conditions of Approval listed below.

This Order and the Conditions of Approval herein remain in effect for the life of the Approved Equipment as used at the Approved Location and shall be binding on Applicant, current owners and operators of the equipment, and Applicant's heirs, successors and assigns unless amended or superseded by a subsequent Order issued by ORCAA or unless the equipment is permanently shut down. The Applicant must notify any subsequent owner, operator, heirs, successor or assigns of this Order and the Conditions of Approval herein.

Conditions of Approval established in this Order shall be enforceable in addition to any applicable state, local and federal regulations, or standards in existence now or in the future. Compliance with the conditions of this Order do not relieve the Applicant or any owner or operator from compliance with ORCAA Regulations, chapter 70A.15 of the Revised Code of Washington, or any other emissions control requirements, nor from any penalties for failure to comply with the same. Applicant may appeal this Order to the Pollution Control Hearings Board ("PCHB") by filing a written appeal with the PCHB and serving a copy upon ORCAA within thirty (30) days of receipt of this Order.

This Order supersedes Order # 23NOC1613 and is GRANTED, for the Approved Location, subject to the following Conditions of Approval:

- 1. Approved Equipment:** The equipment and activities described in Notice of Construction application Nos. 98NOC021, 00NOC034, 00NOC059, 02NOC273, 16MOD1178, 17NOC1261, 19NOC1336, 20NOC1451, 20NOC1454, 21NOC1483, 23NOC1613, and 23NOC1621, application addendums, and the associated Final Determinations are approved for construction and operation subject to conditions in this Order of Approval.

2. **Preapproval Required.** Prior approval by ORCAA may be required for the following as specified in ORCAA Rule 6.1:

- a. Construction, installation, or establishment of any stationary source;
- b. Modification to any existing stationary source;
- c. Replacement or substantial alteration of emission control technology installed on an existing stationary source; or,
- d. Deviations from the approved plans, drawings, data, and specifications of the stationary sources listed in the following table:

Table 1. Approved Stationary Source

Stationary Source	Equipment Specifications
Line 1 and 2 Can Washer	<ul style="list-style-type: none"> ▪ Cincinnati Industrial Machinery (CIM) Model #BS1122422-88 C40-2
Line 1 and 2 Can Washer Dryer	<ul style="list-style-type: none"> ▪ Eclipse 440 AH dryer ▪ 2 Natural gas-fired burners, 8.8 MMBtu/hr maximum heat input
Lines 1 and 2 Rim Coating	<ul style="list-style-type: none"> ▪ U.F. Fusion U.V. System Mode DRR-120 ▪ Ultraviolet curing
Line 1 Printer and Decorator	<ul style="list-style-type: none"> ▪ Line 1 - Concord Decorator-Alcoa Serial # D3008
Line 2 Printer and Decorator	<ul style="list-style-type: none"> ▪ Concord Decorator-Alcoa Serial# 307301
Line 1 Printer Oven	<ul style="list-style-type: none"> ▪ OSI Model# 1600-CPM Single Zone ▪ 2 Natural gas-fired burners, 5 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5000 CFM ▪ Exhaust routed to RTO
Line 2 Printer Oven	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 1 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Fisher Model 102MSH MARK3 ▪ 7 units per line ▪ High transfer efficiency spray technique (>94% efficiency) ▪ Enclosed LSM housings with capture system
Line 2 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Each housing equipped with particulate filter system with at least 99% filtration efficiency ▪ LSM conveyor to the IBO will be equipped with a capture system consisting of a hood and enclosed on all sides ▪ All capture systems routed to RTO

Line 1 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate: ~8,900 CFM ▪ Exhaust routed to RTO
Line 2 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate: ~8,900 CFM ▪ Exhaust routed to RTO
Line 3 Can Washer	<ul style="list-style-type: none"> ▪ Greenbank Torrent One ▪ Mist elimination system in Stage 2
Line 3 Rim Coating	<ul style="list-style-type: none"> ▪ UVio 36" Rim-Up Integrated Mass Rim Coating System ▪ Ultraviolet curing
Line 3 Decorator Unit #31	<ul style="list-style-type: none"> ▪ Stolle Concord 24MRT-8 Color Decorator ▪ 2,000 cans-per-minute ▪ Room vent exhaust flowrate: ~4950 CFM ▪ Close capture system on ink and overvarnish application areas routed to RTO
Line 3 Decorator Unit #32	<ul style="list-style-type: none"> ▪ CMbE Reformat ▪ 2,000 cans-per-minute ▪ Room vent exhaust flowrate: ~4950 CFM ▪ Close capture system on ink and overvarnish application areas routed to RTO
Line 3 Printer Oven #31	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 3 Printer Oven #32	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 3 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ CMbE 3200 Dual Turret LSM ▪ 9 units ▪ High transfer efficiency spray technique (>94% efficiency) ▪ Enclosed LSM housings with capture system

	<ul style="list-style-type: none"> ▪ Each housing equipped with particulate filter system with at least 99% filtration efficiency ▪ LSM conveyor to the IBO will be equipped with a capture system consisting of a hood and enclosed on all sides ▪ All capture systems routed to RTO
Line 3 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate Zone 1: ~2,995 CFM ▪ Exhaust Flowrate Zone 2: ~6000 CFM ▪ Exhaust routed to RTO
Line 3 Decorator Solvent Usage	<ul style="list-style-type: none"> ▪ Isopropanol (decorator cleaning and parts washer) ▪ Room vent exhaust flowrate (two): ~4950 CFM each
Regenerative Thermal Oxidizer (RTO)	<ul style="list-style-type: none"> ▪ Anguil Model 550 ▪ Three-bed regenerative thermal oxidizer ▪ Natural-gas fired – up to 15 MMBtu/hr ▪ Guaranteed 98 control efficiency for VOC ▪ Dust collector pre-filter for Line 1 & 2 LSMs

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.2(l)]

3. Facility-Wide VOC Emission Limits. Facility-wide emissions of volatile organic compounds must not exceed 180.5 tons per 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

4. Annual Formaldehyde Emission Limits.

a. Emissions of formaldehyde from Can Coating Lines 1 and 2 must not exceed 2,299 pounds per 12-month rolling period; and

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

b. Facility-wide emissions of formaldehyde must not exceed 4,378 pounds per 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

5. Annual Emission Limits Monitoring. Compliance with the emission limits in Conditions 3 and 4 must be monitored at least monthly by computing the actual amount of emissions over the previous month and consecutive 12-month period. Emissions must be calculated using the following methods or alternative method if approved by ORCAA:

a. **Material Use and Composition.** Monthly use of inks, lacquers, varnishes, cleaning solvents, and other materials containing VOCs and formaldehyde must be monitored as follows:

i. Usage of each material must be monitored at least monthly in terms of totals pounds used, total gallons used, or both.

ii. Material usage records must be sufficient to determine the amount of each material applied during bypass of the RTO.

- iii. The VOC and HAP composition of each unique material must be determined based on safety data sheets (SDS) and/or Certificates of Analysis specific to each material.
- b. **Can Coating Emissions.** Emissions from coating application (including rim coat, ink, overvarnish, and inside lacquer) must be calculated as follows:
 - i. VOC emissions must be calculated based on actual usage and composition for each material and using material balance methods and capture and control efficiency of the RTO, if applicable.
 - ii. Formaldehyde emissions which are formed in the curing ovens must be calculated based on the actual amount of cans processed through each can coating line or the amount of coating or coating solids applied and using emission factors based on the most recent performance test or other factors as approved by ORCAA. Formaldehyde emissions from curing must be included in the total VOC emissions calculated for the can coating lines.
 - iii. Emission calculations based on the actual amount of cans produced or coating material applied must include spoilage. Spoilage means the cans processed in the can coating line that are discarded for defects or other reasons and are not included in the facility can production count.
 - iv. VOC emission calculations based on capture and control efficiency of the RTO must use the capture and control efficiency of the most recent performance test, unless required monitoring in Condition 34 and Condition 37 indicate that the capture and control efficiency determined during the most recent performance test was not continuously maintained.
- c. **Solvent Usage.** VOC emissions from solvent cleaning must be calculated based on material balance and actual usage and composition of each material.
- d. **Combustion Emissions.** VOC and formaldehyde emissions from combustion of natural gas or other fuels must be calculated based on the amount of fuel combusted during the period and emission factors from the most current version of the EPA document, Compilation of Air Pollutant Emission Factors, AP-42.
- e. **Storage Tanks.** VOC emissions from storage tanks containing VOC compounds must be calculated based on the actual throughput during the period and emission calculation methods from the most current version of the EPA document, Compilation of Air Pollutant Emission Factors, AP-42.
- f. **Credit for Waste.** The permittee may credit shipments of waste in the mass balance calculations in (b) and (c) only when a characterization test has been performed on each container of waste, or on a container representing a group of containers filled from one batch of waste.

[Regulatory Basis: ORCAA Rule 8.11]

6. **Annual Emission Limit Recordkeeping:** The following records must be maintained for at least five years from the date the record originated, or as specified, and made available for inspection upon request:
 - a. Records of monthly and 12-month rolling totals for VOC and formaldehyde emissions as required by Condition 5;

- b. Records of material and fuel usage, composition data, and any other data used to calculate emissions; and
- c. Safety data sheets (SDS) for all VOC-containing materials used in the process.

[Regulatory Basis: ORCAA Rule 8.11]

7. Can Washing Solution Requirements. Can coating solutions that meet the following criteria are approved for use by the permittee:

- a. The can washing solutions must not contain any TAPs (as defined by Chapter 173-460 WAC) except for sulfuric acid and hydrogen fluoride;
- b. The can washing solutions must not contain more than 60 percent sulfuric acid by weight, as applied; and
- c. The can washing solutions must not contain more than 5 percent hydrogen fluoride by weight, as applied.

[Regulatory Basis: (a) ORCAA Rule 6.1.2(l); (b) and (c) ORCAA Rule 6.1.4(a)(2)]

8. Reformulated or New Can Washing Solution Monitoring. The permittee must review each new or reformulated can washing solution prior to use to assure it meets the criteria in Condition 7. The permittee may show compliance with Condition 7 by documenting that the can washing solution as purchased meets the criteria.

[Regulatory Basis: ORCAA Rule 8.11]

9. Reformulated or New Can Washing Solutions Recordkeeping. Records of all determinations for reformulated or new can washing solutions under Condition 8 must be maintained for at least five years from the date the record originated and made available or inspection upon request.

[Regulatory Basis: ORCAA Rule 8.8]

10. Can Washing Operation and Maintenance Plan. Prior to startup of the Line 3 Can Washer, the owner or operator shall develop an Operations and Maintenance (O&M) plan to include procedures specific to operation and maintenance of the Line 1 and 2 Can Washer, Line 1 and 2 Can Washer Dryer, and the Line 3 Can Washer.

[Regulatory Basis:

Both can washers - ORCAA Rule 8.8;

Line 1 and 2 Washer – WAC 173-460-040(9)]

11. Approved Coatings / Material Limits. Coatings that meet the following criteria are approved for use by the permittee:

- a. Rim coat varnish must be applied using roll on application and cured by ultraviolet lamps. The varnish must not contain any HAPs or TAPs; and VOC content must be less than 0.01 pounds per gallon.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. Inks must be applied via using roll on application and contain no TAPs or HAPs except for formaldehyde.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

c. Overvarnish and inside lacquer must meet the applicable VOC limits in Condition 16 and:

Coating Type	Overvarnish	Inside Lacquer
i. The coating must not contain any TAPs ¹ or HAPs ² except for...	2-butoxyethanol; formaldehyde; cresols (o-, m-, p-); ethyl benzene; ethylene glycol; methanol; silica; sodium hydroxide; toluene; xylene (o-, m-, p-)	2-butoxyethanol; formaldehyde; glycol ethers
ii. The ethylene glycol monobutyl ether (EGBE) (CAS 111-76-2) content of the coating must be no more than...	7.4% by weight	7.4% by weight
iii. The coating contains...	no glycol ethers	no more than 0.5% by weight glycol ethers
iv. The coating contains...	(A) no more than 0.01004 % by weight cresols (mixture) (m-, o-, p-) (B) no more than 0.00072% by weight ethylbenzene (C) no more than 0.00242% by weight ethylene glycol (D) no more than 0.04582% by weight methanol (E) no more than 0.0000502% by weight sodium hydroxide (F) no more than 0.000019% by weight toluene (G) no more than 0.00407% by weight xylene (mixture) (m-, o-, p-)	(A) no cresols (mixture) (m-, o-, p-) (B) no ethylbenzene (C) no ethylene glycol (D) no methanol (E) no sodium hydroxide (F) no toluene (G) no xylene (mixture) (m-, o-, p-)
v. Total amount of coating used shall not exceed...	187,000 gallons per consecutive 12-month period	574,344 gallons per consecutive 12-month period
vi. The coating...	Is applied by roll on application	May be spray applied

¹ as defined by Chapter 173-460 WAC

² as defined by the Federal Clean Air Act

[Regulatory Basis:

- i, iv, v, vi - ORCAA Rule 6.1.2(l);*
- ii. ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080;*
- ii. - Overvarnish - ORCAA Rule 6.1.2(l), ORCAA Rule 6.1.4(a)(2);*
- ii. - Inside Lacquer – ORCAA Rule 6.1.2(l)]*

12. Material Use Limit Monitoring: Compliance with the material use limits in Condition 11(c)(v) must be monitored at least monthly by calculating the actual amount of inside lacquer and overvarnish used during the previous month and 12-consecutive month period.

[Regulatory Basis: ORCAA Rule 8.11]

13. Material Use Limit Recordkeeping. Records of monthly and 12-month rolling totals of material usage as required by Condition 12 must be maintained for at least five years from the date the record originated and made available or inspection upon request.

[Regulatory Basis: ORCAA Rule 8.8]

14. Reformulated or New Coating Materials Monitoring. The permittee must review each new or reformulated coating material prior to use to assure it meets the criteria in Condition 11.

[Regulatory Basis: ORCAA Rule 8.11]

15. Reformulated or New Coating Materials Recordkeeping. Records of all determinations for reformulated or new materials under Condition 14 must be maintained for at least five years from the date the record originated and made available or inspection upon request.

[Regulatory Basis: ORCAA Rule 8.8]

16. VOC Coating Limits. The permittee must not discharge or cause the discharge of VOC emissions to the atmosphere that exceed the following volume-weighted calendar-month average emissions:

- a. 0.46 kilogram of VOC per liter of coating solids (3.84 pounds of VOC per gallon of coating solids) from each over-varnish coating operation; and,
- b. 0.89 kilograms of VOC per liter of coating solids (7.43 pounds of VOC per gallon of coating solids) from each two-piece can inside spray coating operation.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); 40 CFR Part 60.492]

17. VOC Coating Limit Compliance Methods. The permittee must conduct a performance test each calendar month using the procedures described in §60.493(b) to monitor compliance with the emission limits in Condition 16.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); 40 CFR Part 60.493(b)]

18. VOC Coating Limit Quarterly Reports. The permittee must identify, record, and submit quarterly reports to ORCAA of each instance in which the volume weight average of the total mass of VOC per volume of coating solids, is greater than the limit specified in Condition 16. The reports must be submitted no later than 30 days after the end of each calendar quarter. If no such instances occur during a particular quarter, a report stating this must be submitted to ORCAA semiannually.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.11; 40 CFR Part 60.495(b)]

19. VOC Coating Limit Recordkeeping. Records of all data and calculations used to determine VOC emissions for purposes of the monthly compliance demonstrations required by Condition 17 must be maintained at the plant site for a period of at least five years.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.11; 40 CFR Part 60.495(d)]

20. Line 1 and 2 Ethylene Glycol Monobutyl Ether (EGBE) (CAS 111-76-2) Limits. The following limits apply to Can Coating Lines 1 and 2:

- a. Emissions of EGBE during normal operation must not exceed 225.2 pounds per day; and
- b. Emissions of EGBE during bypass must not exceed 424.9 pounds per day.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

21. Line 1 and 2 EGBE Limits Monitoring. The permittee must develop an ethylene glycol monobutyl ether (EGBE) monitoring plan that describes the methods the permittee will use to assure continuous compliance with the limit in Condition 20. The plan must be revised, if needed, and must be implemented at all times Can Manufacturing Line 3 is operating.

[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 6.1.4(a)(5); 173-460-080(3)]

22. Line 1 and 2 EGBE Limits Recordkeeping. Records of monitoring conducted per the monitoring plan in Condition 21 must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.

[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-080(3)]

23. Curing Ovens. The following limits and requirements apply to the Line 2 Pin Oven, Line 1 Inside Bake Oven, Line 2 Inside Bake Oven, Line 3 Printer Oven #31 and #32, and Line 3 Inside Bake Oven at the facility:

- a. **Approved Fuel:** The curing ovens may combust only natural gas unless prior approval is granted by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. **Operation and Maintenance:** Operation and maintenance procedures recommended by the manufacturer for maintaining proper combustion must be followed. A copy of the recommended operation and maintenance procedures shall be kept on-site.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

- c. **Tune-ups:** Combustion systems must be tuned-up to meet the NO_x and CO emissions levels stated below or the manufacturer's recommended or guaranteed operating emissions levels, whichever levels result in the least emissions of NO_x and CO. The ovens must be tuned in the first month of operation and according to the minimum frequency stated below.

Fuel	Tune-up Frequency	NO _x (ppm @ 3% O ₂)	CO (ppm @ 3% O ₂)
Natural Gas	Every 61 months	80	100

[Regulatory Basis: ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

d. Tune-up Procedures:

- i. Tune-up must include measuring concentrations of NO_x, CO and O₂ under normal operating load, making any needed adjustments to combustion systems, and re-measuring emissions levels to confirm the prescribed emissions levels in Condition 14(c) are met.
- ii. A record of all measurements, adjustments and maintenance actions must be retained.
- iii. Emissions must be measured using an electrochemical cell combustion analyzer or another analyzer pre-approved by ORCAA;
- iv. The analyzer(s) response to span (calibration) gas of a known concentration (reference) must be determined before and after testing. No more than 12 hours may elapse between span gas response checks. Test results are invalid if the analyzer zero or span drift exceeds 10% of the span value.
- v. The CO and NO_x span gas concentrations must be no less than 50% and no more than 200% of the target emission concentrations per Condition 23(c). A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.
- vi. Sampling and measurement must consist of at least 5 minutes of data collection. Data must not be collected until after the analyzer readings have stabilized.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

24. Lacquer Spray Machine Filters. The Line 1, Line 2, and Line 3 Lacquer Spray Machines overspray control system must be designed and operated according to the following requirements:

- a. Each lacquer spray machine must be equipped with a particulate filter with a rated filtration efficiency of at least 99%.
- b. Inside spray lacquer must be applied within the approved lacquer spray machines and only when the exhaust and filtration system is fully operating.
- c. Exhaust filters must be properly seated and must cover all openings of the exhaust air intakes.
- d. The permittee must develop, implement and update when necessary an Operations and Maintenance (O&M) plan for the lacquer spray machines. At a minimum, the plan must include procedures and a schedule for inspecting and replacing the filters.
- e. Filters must be replaced whenever damaged or loaded with particulate build-up to an extent that jeopardizes the effectiveness of the ventilation system to capture emissions.

[Regulatory Basis:

Line 1 and 2 - ORCAA Rule 6.1.10(b);

Line 3 – ORCAA Rule 6.1.4(a)(2)]]

25. Line 3 Solvent Usage Limit. The permittee must not use more than 2.6 gallons of isopropanol per hour on Line 3 Can Manufacturing Line.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

26. Line 3 Solvent Cleaning BACT. The Line 3 decorator capture system must be operating during cleaning of the decorators (the close capture hoods may be opened as needed for cleaning).

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

27. Line 3 Solvent Monitoring. Prior to startup of Line 3 Decorator, the permittee must develop an isopropanol monitoring plan to detail the methods the permittee will use to assure continuous compliance with the limit in Condition 25 and operating requirements in Condition 26. The plan must be made available for inspection by ORCAA upon request. The plan must be revised, if needed, and must be implemented at all times isopropanol is used on Can Manufacturing Line 3.

[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

28. Line 3 Solvent Recordkeeping. Records of all monitoring conducted per the monitoring plan in Condition 26 must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.

[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-070]

29. Pollution Prevention. All coatings, solvents, and other VOC-containing materials or cloths must be stored in closed, airtight containers. All volatile material spills must be cleaned up promptly.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

30. Curing Oven Capture Requirement: All emissions from the Lines 1, 2, and 3 Printer Ovens (PIN Ovens) and Lines 1, 2, and 3 Inside Bake Ovens (IBOs) must be routed to the regenerative thermal oxidizer at all times except during bypass as allowed by Condition 36.

[Regulatory Basis:

All ovens – ORCAA Rule 8.6(b);

Lines 1 and 2 Ovens – ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 2 and 3 PIN Ovens, Lines 1, 2, and 3 IBOs – ORCAA Rule 6.1.4(a)(2);

Line 1 PIN Oven – ORCAA Rule 6.1.10(b)(1)]

31. Coating Application Capture Requirement: The lacquer spray machines (all lines), the conveyors between the lacquer spray machines and the inside bake oven (all lines), and the Line 3 decorators must each be equipped with a system to capture volatile emissions. The capture systems must be operating at all times the coating lines are operating. Captured emissions must be routed to the regenerative thermal oxidizer at all times except during bypass as allowed by Condition 36.

[Regulatory Basis:

Lines 1 and 2 – ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 3 - ORCAA Rule 6.1.4(a)(2)]

32. Line 1 and 2 Capture Efficiency. The capture and collection systems for the Line 1 and Line 2 Can Coating Lines must operate with a minimum overall organic compound capture efficiency of 75% when the can coating lines are operating. For purposes of this condition, the can coating lines include all processes beginning with and including the printer/decorators and ending with and including the inside bake ovens.

[Regulatory Basis: ORCAA Rule 6.1.10(b)(1); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

33. Line 3 Capture Efficiency. The capture and collection systems for the Line 3 Can Coating Line must operate with a minimum overall organic compound capture efficiency of 84% when the can coating line is operating. For purposes of this condition, the can coating lines include all processes beginning with and including the printer/decorators and ending with and including the inside bake oven.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

34. Capture System Monitoring. The permittee must monitor each capture system that exhausts to the RTO according to the facility's capture system monitoring plan. Prior to startup of Can Manufacturing Line 3, the permittee must revise the existing capture system monitoring plan to include the capture systems in Line 3. The plan must be made available for inspection by ORCAA upon request. At a minimum, the permittee must review and update the capturing system monitoring plan after each capture system performance test or annually, whichever is more frequent. At a minimum the monitoring plan must:

- a. Identify the operating parameter(s) to be monitored to ensure that each capture system is operated under negative pressure and the capture efficiency determined during the last performance test is continuously maintained;
- b. Explain why the parameter(s) is appropriate for demonstrating ongoing compliance; and
- c. Identify the procedures that will be used to monitor the operating parameter(s) (including method and frequency).

[Regulatory Basis:

Line 1 and 2 - ORCAA Rule 6.1.10(b); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 3 – ORCAA Rule 6.1.4(a)(2)]

35. Regenerative Thermal Oxidizer (RTO). The following limits and requirements apply to the regenerative thermal oxidizer:

- a. **Design.** The RTO must be a three-chamber design with a design exhaust rate of at least 55,000 ACFM, which may be demonstrated through written documentation on the regenerative thermal oxidizer provided by the manufacturer.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. **Approved Fuel.** The RTO may combust only natural gas unless prior approval is granted by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- c. **Destruction Efficiency.** The RTO must have a minimum destruction efficiency of 98% for organic compounds as measured by EPA Method 25A.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

- d. **Formaldehyde Emission Limit.**

- i. Emissions of formaldehyde from the RTO stack must not exceed 0.53 pounds per hour at all times.
- ii. Emissions of formaldehyde from the RTO stack must not exceed 0.26 pounds per hour when controlling emissions from Can Coating Lines 1 and 2 only.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 8.6(b)]

- e. **Opacity Limit.** There must be no visible emissions from the Regenerative Thermal Oxidizer as determined in accordance with EPA 40 CFR Part 60 Appendix A, Method 9. This limit does not apply during periods of cold start-up. For compliance with this condition, cold start-up is defined as the period beginning when the RTO is started and ending when the RTO reaches normal operating temperature. This opacity limit is in addition to the state-wide general opacity standard of 20% required under WAC 173-400-040(1) and ORCAA Rule 8.2.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- f. **Tune-ups.** Combustion systems must be tuned-up to meet the NO_x and CO emissions levels stated below or the manufacturer's recommended or guaranteed operating emissions levels, whichever levels result in the least emissions of NO_x and CO. The RTO must be tuned in the first month of operation and according to the minimum frequency stated below. Tune-ups shall be conducted according to the procedures in Condition 23(d).

Fuel	Tune-up Frequency	NO _x (ppm @ 3% O ₂)	CO (ppm @ 3% O ₂)
Natural Gas	Every 61 months	60	50

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

36. RTO Bypass: The following limits and requirements apply:

- a. The regenerative thermal oxidizer may be bypassed for maintenance purposes only.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

- b. The regenerative thermal oxidizer must not be bypassed for more than 200 hours on a 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

- c. When bypassing the RTO, only one of the following may be operational:
 - i. Coating Line 1; or
 - ii. Coating Line 2; or
 - iii. Coating Line 3 at a rate not to exceed 2000 cans-per-minute with no more than one decorator and one PIN oven operating.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(3); ORCAA Rule 8.6(b); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

- d. Total emissions of formaldehyde from Line 1 or 2 bypass stacks must not exceed 1.3 pounds per hour.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- e. Total emissions of formaldehyde from Line 3 bypass stacks must not exceed 1.07 pounds per hour.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- f. Coating Line 3 must not operate in bypass mode until a performance test has been conducted to verify compliance with Condition 36(e). If necessary, Coating Line 3 may operate in bypass mode for the purposes of the performance test.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- g. Visible emissions from the bypass stacks must not exceed ten percent opacity, six-minute average, as determined in accordance with EPA 40 CFR Part 60 Appendix A, Method 9. This limit does not apply during periods of cold start-up. For compliance with this condition, cold start-up is defined as the period beginning when the oven is started and ending when the oven reaches normal operating temperature. This opacity limit is in addition to the state-wide general opacity standard of 20% required under WAC 173-400-040(1) and ORCAA Rule 8.2.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- h. The permittee must monitor bypasses of the RTO. Bypass monitoring must be conducted on each bypass line using one of the following procedures:
 - i. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the emission unit was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.
 - ii. Install, maintain, and operate a bypass line valve or damper indicator to continuous monitor valve or damper position. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve or damper position.
 - iii. Secure the bypass line valve in the nondiverting position with a car-seal or a lock-and-key type configuration and visually inspect the seal or closure mechanism at least once a month. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

37. RTO Temperature Monitoring. The permittee must monitor the combustion chamber temperature of the RTO as follows:

- a. Each RTO combustion chamber must be equipped with a sensor that continuously measures and records the temperature of each combustion chamber (or in the duct immediately downstream of the combustion chamber before any substantial heat exchange occurs). The combustion chamber temperature sensor must be accurate to within $\pm 1\%$ of the temperature being monitored in degrees Fahrenheit or ± 1.8 degrees Fahrenheit, whichever is greater.
- b. Temperature sensors must be installed, maintained, and operated according to manufacturer specifications.

- c. The permittee must develop, implement, and update when necessary a quality control plan to verify that the temperature sensor is still functioning properly. At a minimum, the plan must include the verification method and frequency. Methods may include, but are not limited to, comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices. The temperature sensor must be replaced with a new sensor either if the sensor looks damaged and/or broken or the sensor no longer meets the accuracy requirement specified in Condition 37(a).
- d. The permittee must conduct temperature monitoring at all times the RTO is operating, except during bypass, monitoring malfunctions, associated repairs, and required quality assurance or control activities,
- e. The temperature must be recorded at least once for each successive 15-minute period and the average determined of all recorded readings for each successive 3-hour period.
- f. Prior to the initial performance test, the combustion chamber temperature setpoint must be established at a minimum of 1550 degrees Fahrenheit. The combustion chamber temperature (three-hour average) must not fall below 1500 degrees Fahrenheit.
- g. After the initial performance test, the average combustion chamber temperature measured at the most recent performance test must be established as the minimum combustion chamber temperature setpoint. The combustion chamber temperature (three-hour average) must not fall more than 50 degrees Fahrenheit below the average combustion chamber temperature measured at the most recent performance test.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-060]

38. Operations and Maintenance Plan: The Permittee must develop, implement, and update when necessary an operation and maintenance (O&M) plan to assure the capture and control systems are in continuous compliance with all applicable air regulations and standards. The O&M plan must be retained on site and made available to ORCAA for review when requested. Operating instructions must be established and posted such that they are available for all RTO operators.

[Regulatory Basis: ORCAA Rule 8.8]

39. Capture and Control Systems Recordkeeping: The following records must be maintained for at least five years from the date the record originated, or as specified, and made available for inspection upon request:

- a. Documentation of RTO design specification per Condition 35(a).
- b. Records of RTO tune-ups required by Condition 35(f).
- c. Records of all RTO bypass monitoring including start time and end time, reason for the bypass, emission units venting to the atmosphere during bypass, and amount of each coating material applied during the bypass.
- d. Capture system monitoring plan and all associated capture system monitoring.
- e. Records of LSM filter efficiency per Condition 24(a).

- f. LSM O&M plan required by Condition 24(d). The permittee must keep an inspection and maintenance log for the LSM filter system including the date of each inspection, the name of the inspector, and any repairs and/or maintenance work performed.
- g. RTO combustion chamber temperature monitoring records including all temperature readings and 3-hour averages.
- h. RTO temperature sensor quality control plan and all associated monitoring and maintenance activities.
- i. RTO and capture system O&M plan required by Condition 38. The permittee must keep an inspection and maintenance log for the RTO and its capture systems including the date of each inspection, the name of the inspector, and any repairs and/or maintenance work performed.
- j. Records of maintenance conducted on the equipment listed in Condition 1.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

40. Ongoing Performance Testing Required.

- a. A performance test of RTO destruction efficiency must be performed at least once every 61 months or whenever required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 1.5(i)]

- b. A performance test for compliance with formaldehyde emission limits in Condition 35(d) and Condition 36(d) must be conducted when required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 8.6(b); ORCAA Rule 1.5(i)]

- c. A subsequent performance test for capture efficiency testing is required within 61 months of the initial test or earlier if requested by ORCAA. After that, additional testing may be required if significant changes have been made to the capture system or when required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.10(b); ORCAA Rule 1.5(i)]

41. Line 3 Bypass Performance Test. As required by Condition 36(f), the permittee must conduct a performance test prior to operating Coating Line 3 when the RTO is in bypass mode. The performance test shall be conducted to verify the short-term (maximum hourly) formaldehyde emission rate during bypass of Line 3 is less than or equal to the limit in Condition 36(e) and establish an emission factor for formaldehyde during bypass. Following the initial performance test, the permittee must conduct a performance test for compliance with Condition 36(e) when required by ORCAA.

[Regulatory Basis: ORCAA Rule 8.6(b); ORCAA Rule 6.1.2(l); ORCAA Rule 1.5(i)]

42. Performance Testing Requirements. All performance testing must be conducted as follows unless an alternative has been approved by ORCAA:

- a. Testing must be conducted when all can coating lines are operating at maximum production rate and applying the ink, overvarnish, and inside spray combination that will result in the maximum emissions.
- b. Capture system performance testing must be conducted by determining the weight and VOC content of each material applied according to EPA Method 204A and inlet mass of VOC to the RTO by Method 25A or alternative methods if approved by ORCAA. As an

alternative to conducting separate performance tests to demonstrate compliance with Conditions 32 and 33, the permittee may conduct a compliance test to demonstrate that the overall organic compound capture efficiency of the capture and collection systems of Lines 1, 2, and 3 is at least 80%.

- c. Performance testing for RTO destruction efficiency must be conducted according to EPA Method 25A or alternative method if approved by ORCAA.
- d. Performance testing for formaldehyde must be conducting according to EPA Method 320 or alternative method approved by ORCAA.
- e. Performance testing to determine the volumetric flowrate must be conducted according to EPA Methods 1-3 or alternative method if approved by ORCAA.
- f. A performance test must consist of three runs. Each run must be a minimum of one hour (or longer if the test method requires).
- g. During the performance test, the permittee must monitor and record the RTO combustion chamber temperature(s) at least once every 15 minutes during each of the three test runs. The temperature must be monitored in the combustion chamber or immediately downstream before any substantial heat exchange occurs.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

43. Performance Testing Notifications, Plans and Reports. Whenever performance testing is required:

- a. The permittee must submit a notification of the intent to conduct a performance test and a site-specific test plan to ORCAA at least 60 calendar days before the scheduled date of a performance test.
- b. At a minimum, the test plan must include the following:
 - i. Test program summary;
 - ii. Test schedule;
 - iii. Data quality objectives;
 - iv. Internal and external quality assurance program;
 - v. Identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the RTO determined during the performance test are maintained at all times; and
 - vi. Identify the operating parameters and ink, overvarnish, and inside spray that will be used to meet the objective in Condition 44(a).
- c. The permittee must submit a performance test report to ORCAA no later than 60 days after completion of the test. The performance test must be certified as true and accurate by responsible officials from the testing contractor and the permittee. At a minimum, the performance test report must contain the following information:
 - ix. A description of the source and sampling location;
 - x. The date and time of each test;
 - xi. A summary of test results reported in units and averaging period appropriate to the applicable standard;
 - xii. A description of the test methods and quality assurance procedures used;
 - xiii. The types and amounts of coating materials;
 - xiv. Operating parameters of the emission units and control equipment during each test;

- xv. Raw field data and sample calculations; and
- xvi. Deviations from approved test plans or the O&M Plan.

[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 1.5(d)&(i)]

44. Exhaust Stack and Vent Requirements. Exhaust stacks and vents must meet the following requirements:

- a. There must be no flow obstructions at the point of discharge from the exhaust stacks or vents (i.e. cap) for the Line 2 Pin Oven, Line 1 and 2 Inside Bake Oven, Regenerative Thermal Oxidizer, or any Line 3 stack/vent. However, a weatherproof stack exhaust configuration that does not obstruct the air flow as it exits the stack is acceptable.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. Each stack or vent listed below must have a height above ground that is equal to or greater than the following:

Stack or Vent	Height equal to or greater than...
Line 1 Pin Oven Bypass Stack	14.3 meters
Line 2 Pin Oven Bypass Stack	14.3 meters
Line 1 Inside Bake Oven Bypass Stacks	14.0 meters
Line 2 Inside Bake Oven Bypass Stacks	14.0 meters
Regenerative Thermal Oxidizer Stack	18.3 meters
Line 3 Can Washer Stack	17.4 meters
Line 3 Rooftop Vents	13.7 meters
Line 3 Pin Oven Bypass Stacks	14.3 meters
Line 3 Inside Bake Oven Bypass Stacks	14.0 meters

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

- c. No later than 90 days from the startup of Can Manufacturing Line 3, the permittee shall measure the velocity or volumetric flowrate of the following exhaust stacks or vents listed below to verify rate is as listed in Condition 1 or higher. ORCAA must be notified of the test date, planned test method, and operational parameters that will be monitored (i.e. fan speed, damper settings) at least seven days prior to the testing. After the initial test, subsequent verification of volumetric flowrates from stacks or vents may be required if significant changes have been made to the exhaust system or when required by ORCAA.

- i. Line 3 Can Washer stack
- ii. Line 3 Decorator room vents
- iii. Line 3 Printer Oven Bypass Stacks
- iv. Line 3 Inside Bake Oven Bypass Stacks

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 1.5(i); ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

45. Exhaust Stack and Vent Monitoring Plan. No later than 30 days after measuring velocity or volumetric flowrate as required by Condition 44(c), the permittee must develop and

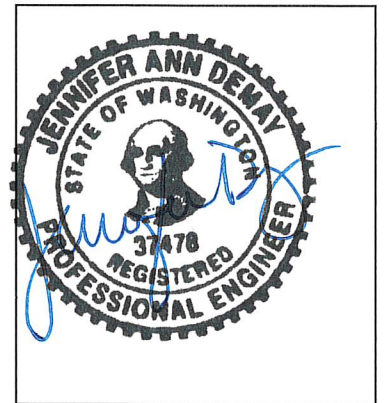
implement an exhaust stack and vent monitoring plan. The plan must be made available for inspection by ORCAA upon request. At a minimum, the monitoring plan must:

- a. Identify the operating parameter(s) to be monitored to assure that the flowrate from the exhaust stacks or vents are continuously maintained as listed in Condition 1;
- b. Explain why the parameter(s) is appropriate for demonstrating ongoing compliance;
- c. Identify the procedures that will be used to monitor the operating parameter(s) (including method and frequency); and
- d. If ongoing monitoring is not necessary for a specific stack, documentation of that determination (i.e. fixed speed fan).

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

46. Exhaust Stack and Vent Recordkeeping. Records of all exhaust stack and vent testing and monitoring must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.

[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-070]



Jennifer DeMay

2/26/2024

PREPARED BY: Jennifer DeMay, P.E.

Date



**Olympic Region
Clean Air Agency**
2940 Limited Lane NW
Olympia, WA 98502

(360) 539-7610
Or 1-800-422-5623
Fax: (360) 491-6308

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NEW SOURCE

FINAL DETERMINATION

to APPROVE:

use PFAS Matte Over Varnish
PPG 9201-811F (a PFAS-free
overvarnish)

Crown Cork & Seal
1202 Fones Road, Olympia

23NOC1621
Prepared on February 9, 2024

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NOTICE OF CONSTRUCTION FINAL DETERMINATION TO APPROVE

Olympic Region Clean Air Agency

Issued to:	Crown Cork & Seal	County:	Thurston
Location:	1202 Fones Road Olympia, WA 98501	Source:	8
Application #:	23NOC1621	RC:	OP1
Prepared on:	February 9, 2024	File:	152

1. Summary

Crown Cork & Seal (Crown) seeks approval from Olympic Region Clean Air Agency (ORCAA) to use PFAS Matte Over Varnish PPG 9201-811F (a PFAS-free overvarnish) at 1202 Fones Road, Olympia, Washington. Crown requests approval to use a reformulated matte varnish in their decorators and PIN ovens that will result in emissions of toxic air pollutants not previously emitted. ORCAA staff reviewed Crown's proposal and concluded it may be conditionally approved. Recommended conditions of approval are detailed in Section 17 of this Final Determination report.

2. Regulatory Background

Pursuant to the Washington Clean Air Act under chapter 70A.15 of the Revised Code of Washington, ORCAA's Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c)¹ require New Source Review (NSR) for new stationary sources of air pollution (referred to as new sources) in ORCAA's jurisdiction. NSR is also required prior to installing, replacing, or substantially altering any air pollution control technology. NSR generally refers to the process of evaluating air quality impacts and the likelihood of compliance with applicable air regulations and standards. NSR and approval of an air permit by ORCAA is required prior to commencing construction or modification of any new source or prior to installing, replacing, or substantially altering air pollution control technology. The goal of NSR is to assure compliance with applicable air regulations and standards, including equipment performance standards and ambient air quality standards.

¹ A State Implementation Plan (SIP) is a collection of regulations and documents used by a state, territory, or local air district to implement, maintain, and enforce the National Ambient Air Quality Standards, or NAAQS, and to fulfill other requirements of the federal Clean Air Act. The Clean Air Act requires the EPA to review and approve all SIPs. ORCAA's SIP was last approved by EPA in 1995.

NSR is initiated by a project proponent submitting an air permit application referred to as Notice of Construction (NOC) application², which provides ORCAA information on the proposed project of sufficient detail to characterize air impacts. NOC applications are posted on ORCAA's website and may undergo a public notice and comment period if requested by the public or if emissions increases trigger an automatic public notice. Approval of a NOC in an attainment or unclassifiable area³ is contingent on verifying a proposed project meets the following criteria from ORCAA's Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6:

1. **Performance Standards** - The new stationary source will likely comply with applicable air-performance standards such as federal new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAPs), or any performance standards adopted under chapter 70A.15 RCW;
2. **BACT** - The new stationary source will employ "Best Available Control Technology" (BACT) to control all air pollutants emitted;
3. **RACT** - Replaced or substantially altered air pollution control technology meets the standard of "Reasonably Available Control Technology" (RACT) as defined in ORCAA Rule 1.4;
4. **Ambient Air Quality** - Emissions from the new stationary source will not cause or contribute to a violation of any ambient air quality standard;
5. **Federal Air Permitting Requirements** - The new stationary source secures all applicable federal air permits that may apply; and,
6. **Air Toxics** - If there are increases in toxic air pollutant (TAP) emissions, the requirements of Washington's Controls for New Sources of Toxic Air Pollutants under Chapter 173-460 WAC are met.

In this case, Crown is proposing to use PFAS Matte Over Varnish PPG 9201-811F (a PFAS-free overvarnish) at their aluminum beverage can manufacturing plant located in Olympia, Washington. Use of the reformulated overvarnish is considered a change in the method of operation of the decorators and PIN ovens that will increase emissions as the reformulated overvarnish contains HAP/TAP constituents that are not present in the current overvarnish. A change in the method of operation of the decorators and PIN ovens that results in the emissions of air contaminants not previously emitted is a modification of the existing stationary source which requires approval through a Notice of Construction application. Crown is not proposing to make any physical changes to the existing decorators or PIN ovens and will continue to operate the capture and control systems as previously approved.

² There are two categories of NOC applications: Notice of Construction (NOC) and Notice of Construction Revision (NOR). NOCs are required for new or modified sources, new control technology, replacing an existing stationary source or control technology, and substantially altering control technology. NORs are required when an owner or operator requests a revision to an existing air permit issued by ORCAA.

³ Unclassified area or "attainment area" means an area that has not otherwise been designated by EPA as nonattainment with ambient air quality standards for a particular regulated pollutant. Attainment area means any geographic area in which levels of a given criteria air pollutant (e.g., ozone, carbon monoxide, PM10, PM2.5, and nitrogen dioxide) meet the health-based National Ambient Air Quality Standards (NAAQS) for that pollutant. An area may be an attainment area for one pollutant and a nonattainment area for others.

3. Facility Background

Crown commenced operations in Olympia in 1959 as a two-piece can manufacturing plant and registered as an air contaminant source in 1972. Crown has received numerous Notice of Construction (NOC) approvals from ORCAA for various equipment installations and operational changes. Table 1 provides a summary of all NOC applications submitted and their status.

Table 1. Permitting History with ORCAA

Permit # (date)	Description	Status
Regulatory Order – 1972	A Regulatory Order was issued in 1972 for installation of a fume incinerator. The fume incinerator was removed from service in the 1980s.	EQUIPMENT REMOVED
PSD-87-1	In 1987 Crown received approval for a major modification subject to federal air regulations for Prevention of Significant Deterioration (PSD). The modification entailed expanding the existing can coating operations and adding two can end manufacturing lines. PSD-87-1 was rescinded by Ecology after ORCAA issued a 249 ton/yr VOC limit in 00MOD063.	RESCINDED
91NOC455	On December 23, 1991, under NOC# 91NOC455, Crown received approval to install a 3rd can end line. Crown discontinued use of the end line in 1998.	EQUIPMENT REMOVED
95NOC641	On June 20, 1995, under NOC# 95NOC641, Crown received approval to install a new can washer. This order was superseded when Crown requested to change these limits under 16MOD1178.	EQUIPMENT REMOVED
95NOC662	On October 5, 1995, under NOC# 95NOC662, Crown received approval to install a new gas fired boiler. Since issuance of this NOC, ORCAA has determined that natural gas boilers less than 5 MMBtu/hr are insignificant and do not require NSR. Crown requested rescission of this NOC on March 24, 2016 and ORCAA issued the rescission on April 1, 2016.	RESCINDED
97NOC040	In 1997 under NOC# 97NOC040, Crown received approval to install a new printing and over-varnish unit and PIN oven. This NOC was no longer valid after the issuance of 98NOC021 to replace all existing can lines with two new lines. The new printing and overvarnish unit installed in 1997 qualified as a new effected facility under 40 CFR Part 60 and triggered requirements in Subpart WW of 40 CFR Part 60.	EQUIPMENT REMOVED
98-ERC-018	In May of 1998, Crown received approval of emission reduction credits (ERC) for discontinuing use of end line #3. The ERC is no longer valid.	SUPERSEDED
98NOC021	In June of 1998, under NOC# 98NOC021, Crown received approval to replace the existing can coating lines at their facility in Olympia, Washington with two new lines. This action subjected all the can coating lines to requirements under 40 CFR Part 60, Subpart WW. This order was superseded by NOC# 21NOC1483.	SUPERSEDED
99NOC029	On April 27, 1999 Crown submitted an application for emission reduction credits for the closure of End Lines 1 and 2. On July 22, 1999 the request was withdrawn.	WITHDRAWN
99NOC033	On May 19, 1999, Crown submitted a request to retain a third can line as a swing line. The swing line was disabled in 2000 and was removed.	EQUIPMENT REMOVED

00MOD063	In August of 2000, under NOC# 00MOD063 Crown requested, and received approval of a 249 ton per year limit for facility wide emission of VOC. This limit established Crown as a minor stationary source with respect to PSD. As a result of this permitting action and at Crown's request, the Washington Department of Ecology rescinded PSD-87-1.	RESCINDED
00NOC027	In July of 2000, under NOC# 00NOC027 Crown gained approval to use a 78% - 100% sulfuric acid in the can washer. The request for the use of concentrated sulfuric acid solution was in addition to their existing sulfuric acid and hydrogen fluoride usage. Crown requested that the concentrated sulfuric acid be limited to 5000 gallons per 12-month period.	EQUIPMENT REMOVED
00NOC034	In June 2000, under NOC# 00NOC034 Crown gained approval to replace three inside lacquer spray machines (6 units / line) with two new inside lacquer spray machines (7 units / line). This order was superseded by NOC# 21NOC1483.	SUPERSEDED
00NOC059	In August 2000, under NOC# 00NOC059 Crown gained approval to replace two cupping presses with two new cupping presses. At the time, the cupping presses were the bottleneck of the facility. The can production bottleneck then became the can washer, with a capacity of 3960 cans/min. This order was superseded by NOC# 21NOC1483.	SUPERSEDED
02NOC273	In May of 2003, under NOC# 02NOC273 Crown gained approval to install five rooftop stacks meant to exhaust air from equipment that previously exhausted to the building interior. This order was superseded by NOC# 21NOC1483.	SUPERSEDED
05NOC420	Through NOC# 05NOC420, Crown established a federally enforceable limit on emission of Hazardous Air Pollutants (HAPs). This limit establishes emissions of all HAPs to less than 10 tons per year of any single HAP and less than 25 tons per year of all combined HAPs.	RESCINDED
08NOC622	On October 8, 2008, NOC# 08NOC622 was approved and granted approval to Crown to replace one of the two can washers with a new unit. The bodymakers now limit the production capacity of the plant to 3960 cans/min (18 units at 220 cans/min). This order was superseded when Crown requested to change these limits under 16MOD1178.	SUPERSEDED
16MOD1178	Crown received approval to modify their can washing solution limits.	Will be superseded by this Order of Approval
17NOC1261	Crown received approval to use a new inside spray lacquer and three specialty matte overvarnishes. This order was superseded by 19NOC1336.	SUPERSEDED
19NOC1336	Crown received approval for two new inside spray lacquers. This order was superseded by 20NOC1454.	SUPERSEDED
20NOC1454	Crown received approval to modify the % by weight of 2-butoxyethanol in overvarnish. This order was superseded by NOC# 21NOC1483.	SUPERSEDED
21NOC1483	Crown requests to replace three existing curing ovens, make modifications to the exhaust on Lines 1 and 2 LSM and Line 1 Printer Oven, an install a regenerative thermal oxidizer.	SUPERSEDED
21NOC1451	Crown received approval to install a third can manufacturing line.	SUPERSEDED
23NOC1613	Crown received approval to use a reformulated inside spray coating with 7.4% by weight ethylene glycol monobutyl ether (EGBE) (2-butoxyethanol, CAS 111-76-2)	Will be superseded by this Order of Approval

4. Facility Description

Crown Cork & Seal Company (USA), Inc. is an aluminum beverage can manufacturing facility located at 1202 Fones Road in Olympia, Washington.

This description of the can coating process is primarily taken from Crown's NOC application for NOC# 20NOC1451, as indicated by the passages in italics.

Figures 1 and 2. Approximate location of the Crown Cork & Seal Facility in Olympia, WA
(Maps from maps.google.com)

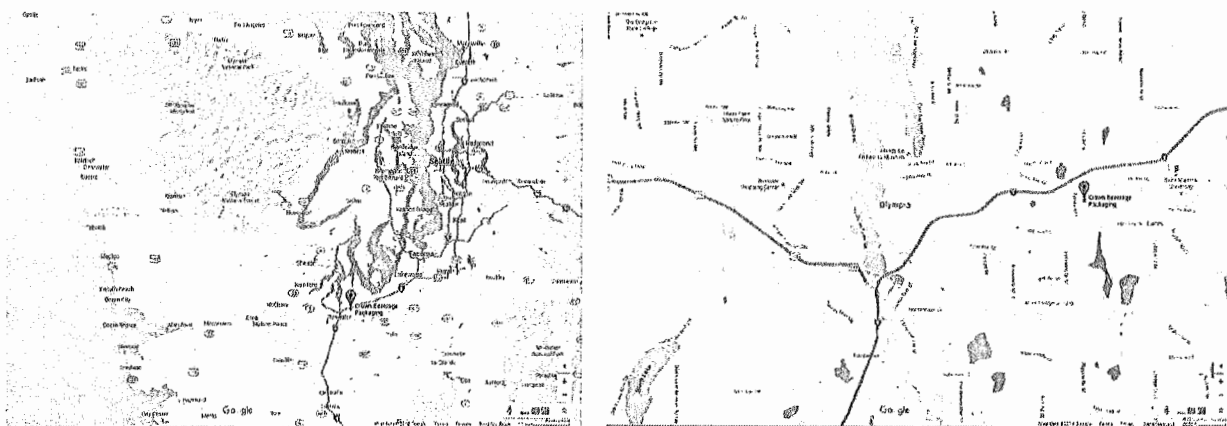
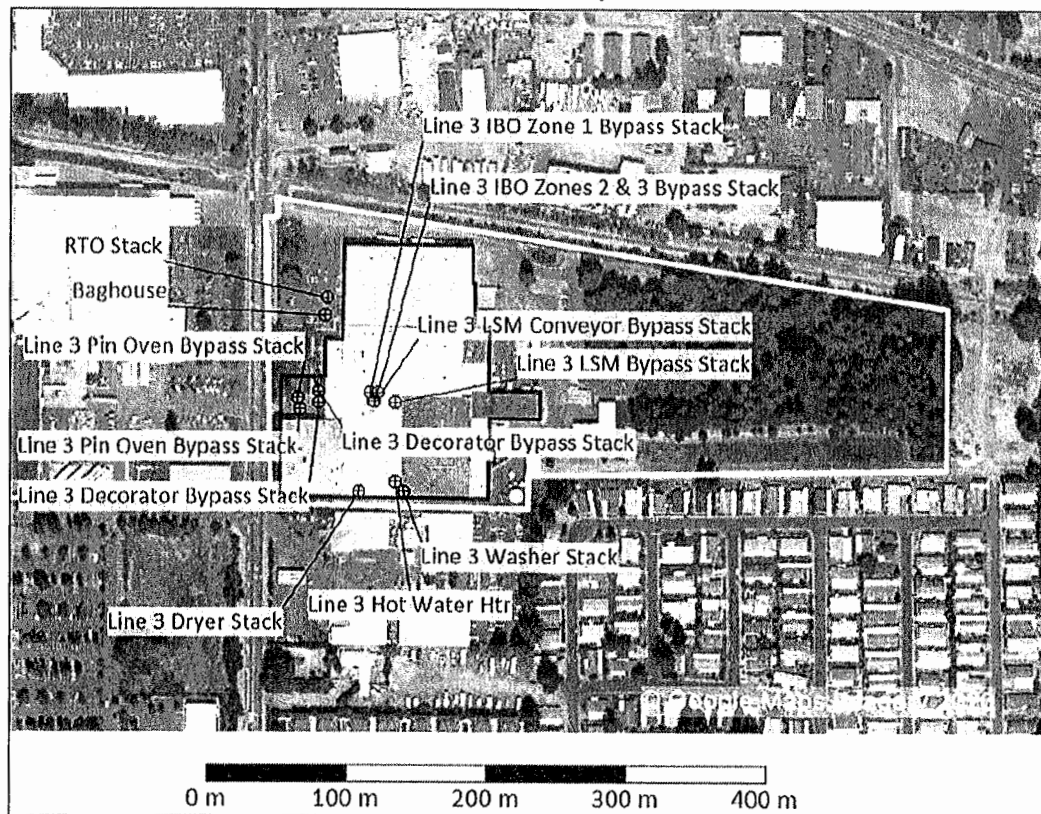


Figure 3: Crown Cork and Seal – Site Map
(From application addendum for 20NOC1451)



4.1 Can Forming

The can forming steps begin when aluminum sheet metal is uncoiled and a copper lubricant (a synthetic lubricant) is spread on the sheet with a roll applicator. The lubricated sheet is fed into a copper press, which stamps out shallow aluminum cups sized for the desired can style being produced. The scrap aluminum left over from the punch press patterns is collected, bailed, and sent for recycling at a secondary aluminum smelter.

Cups from the initial can forming step are continuously fed through an extrusion process (bodymakers) that draws the can to a smaller diameter and irons the walls to the appropriate length for the can style being manufactured. This D&I process is facilitated by application of a drawing lubricant aqueous solution, which aids in the reshaping process (lubricating and cooling the aluminum can and bodymaker dies).

At the exit of the bodymaker, excess aluminum is trimmed from the top of the can body to level the uneven edge and obtain the desired height of the cans. This trimming operation is completed with a knife-like cutting tool that slices off approximately 1/4-inch of excess aluminum.

4.2 Can Washing

Once formed, the can bodies are processed in a can washer to remove any drawing lubricant solution and to treat the metal surface for improved adhesion of inks and coatings. The aluminum surface of the can body is slightly etched, and then a proprietary surfactant surface treatment (containing no VOC) is applied that improves adhesion of the coatings. The can washer is a multi-stage process where dilute acid wash and surface treatment aqueous solutions are sprayed on the cans via a series of nozzles within enclosed sections of the washer. Water rinse stages, including a final rinse with deionized water, follow the acidic washes and surfactant surface treatment stages. In the last stage, the cans pass through a natural gas-fired dryer. The cans exiting the dryer section ("bright cans") are then conveyed to the rim coater for application of a UV varnish to the bottom rim of the can prior to the decoration process step. The can washer stages that spray acidic or surface treatment aqueous solutions are vented to the atmosphere. The can dryer and one of the water rinse stages are ventilated, but this exhaust only contains products of combustion from the dryer burners, water vapor, and possibly minute amounts of acid fume / mist.

4.3 Exterior Decorating and Coating Process

Bright cans from the can washer are conveyed to a bottom rim coater where the bottom of the can body is coated with an ultra-violet (UV) rim varnish which reduces friction and improves the can mobility through the rest of the process. The rim varnish is cured with UV lamps before proceeding to the next step.

The exterior label and decoration are applied in the first section of the decorators. Inks are transferred from an ink well to a series of rollers and then applied to a rubber printing blanket roll. This printing blanket roll and the cans rotate on a mandrel at the same speed in

opposite directions to print the individual color onto the can, which forms the exterior label. Isopropyl alcohol (IPA) is used as solvent to clean decorator units.

Over varnish is roll coated directly over the inks to provide a protective coating over the printed can label. This is a wet-on-wet coating application operation, with no curing step occurring between the printing and over varnish application stations on the decorator. Decorated cans are then transferred to a pin chain conveyer and fed to a curing oven. Once the ink and varnish has cured in the printing pin ovens, the cans are ready for the interior coating.

4.4 Interior Decorating and Coating Process

Decorated cans from the pin oven are conveyed into a bank of LSMs that apply the inside spray coating to the interior of the can. The function of this inside spray coating is to eliminate any contact between the beverage and the aluminum can surface. The inside spray coating is applied with spray nozzles positioned within the spinning can.

Lacquer is applied in three different weights (from lowest to highest): beer weight, beverage weight, and import weight.

Coated cans are conveyed from the LSMs to an in-feed table at the IBO. In the IBO, the cans proceed through the tunnel style oven on an open mesh conveyor to cure the interior coating. The inside spray VOCs driven off in the IBOs are collected and vented to the RTO for control.

4.5 Neck/Flanging Operations

As the final manufacturing step, the top section of the can is necked down to a smaller diameter and flanged to prepare the can to receive the end (lid). Necker machines decrease the diameter of the open end of the can by forcing it through two successive dies (one type on each machine). The spin flanger machines form the can shoulder into a smooth, slightly concave transition between the neck and can body, and then turns the neck back to create a mating surface for the can end during packaging of the beverage. Quality control, packaging, and shipping operations follow the manufacturing process.

5. Project Description

Crown proposes to use a reformulated overvarnish in its decorator units on all three lines. The reformulated overvarnish has a lower VOC content than the current overvarnish but contains some HAP/TAP constituents that are not present in the current overvarnish. Crown is not proposing to make any physical changes to the existing decorators or PIN ovens and will continue to operate the capture and control systems as previously approved.

Figure 4. Process Flow Diagram (Normal RTO Scenario) (From application for 20NOC1451)

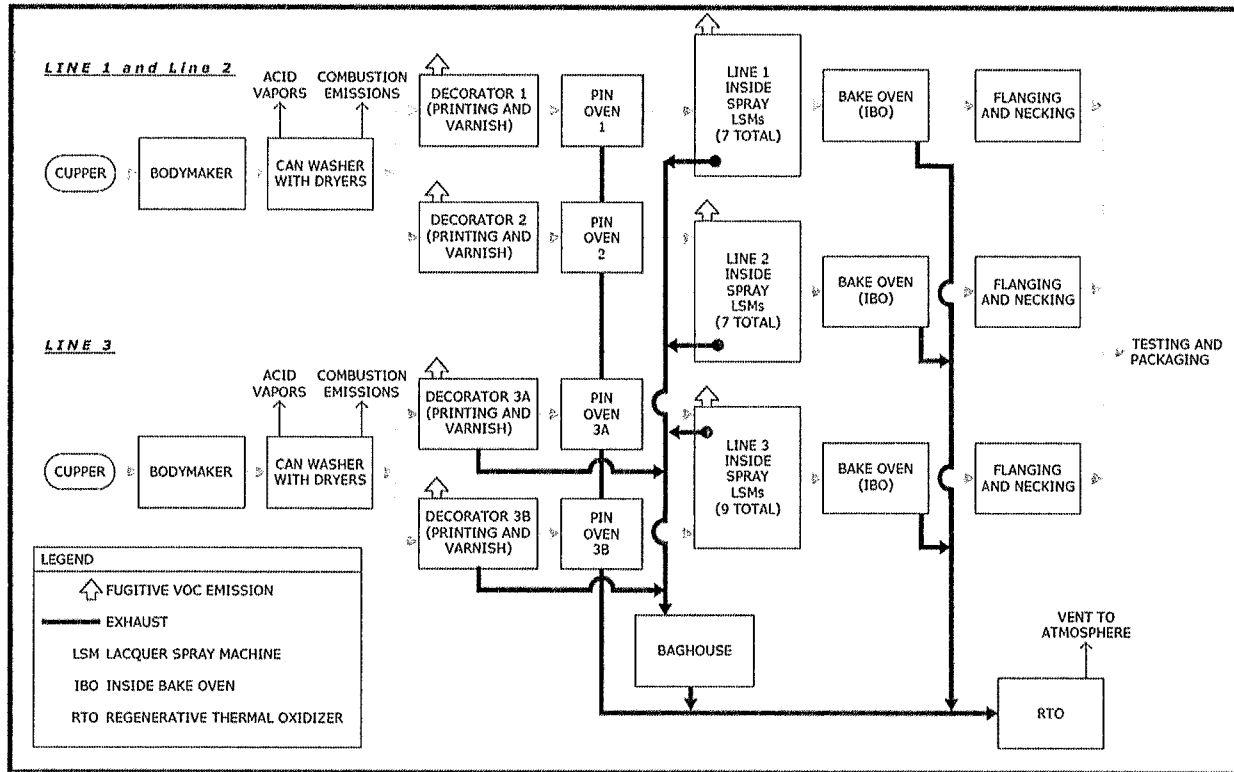


Table 2. Emission Unit¹ Specifications

EU#	Emission Units	Approved Specifications	Air Pollution Controls	Alternative Operating Scenario	Stack/Exhaust
CAN COATING LINES 1 AND 2					
EU1	Line B Can Washer	Cincinnati Industrial Machinery (CIM) Model #BS1122422-88 C40-2 5000 cans per minute ²	Can washing solution limitations	N/A	Washer 1A
EU2	Line B Can Washer Natural Gas-Fired Dryer	Eclipse 440 AH dryer 2 Natural gas-fired burners 8.8 MMBtu/hr maximum heat input	None	N/A	Washer/Oven 1A Washer/Oven 1B Stack Height: 13.7 m
EU4	Rim Coater with UV Cure	U.V. Fusion U.V. System Model DRR-120	<ul style="list-style-type: none"> ▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings and low-VOC coatings. ▪ Use of UV curing. 	N/A	None
EU5	Solvent Cleaning	<ul style="list-style-type: none"> ▪ Parts Washers (isopropanol) ▪ Hand cleaning of decorator units (isopropanol) ▪ Machine/Millwright shops (naphtha) 	Pollution prevention	N/A	Roof vent
CAN COATING LINE 1					
EU6	Line 1 Decorator Unit	Concord Decorator-Alcoa Serial # D3008 1900 cans-per-minute ²	<ul style="list-style-type: none"> ▪ Use of low-VOC inks. ▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish. ▪ Roll on application. 	N/A	Roof vent
EU7	Line 1 Printer Oven (PIN)	<ul style="list-style-type: none"> ▪ OSI Model# 1600-CPM SINGLE ZONE ▪ 2 Natural gas-fired burners ▪ 5 MMBtu/hr maximum heat input 	<p>All exhaust routed to RTO</p> <ul style="list-style-type: none"> ▪ RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other PIN in RTO bypass mode 	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other PIN in RTO bypass mode</p>	<p>Normal operation: RTO Stack</p> <p>During bypass: PIN 1A PIN 1B Height: 14.3 m Diameter: 0.38 m Flowrate: ~5,000 CFM Temp: ~448 K</p>

EU8	Line 1 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Fisher Model 102MSH MARK3 ▪ 7 units @ 350 cans per minute² ▪ High transfer efficiency spray technique (>94%) 	<ul style="list-style-type: none"> ▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings. ▪ Filters with 99% filtration efficiency on exhaust ▪ Capture systems on LSM boxes and conveyor to IBO. Both routed to RTO, except during bypass. 	N/A	<p><u>Normal operation:</u> RTO Stack</p> <p><u>During bypass:</u> LSM 1A</p>
EU9	Line 1 Internal Bake Oven (IBO)	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr maximum heat input ▪ 3,000 cans-per-minute² ▪ Operating Temp – 395-400F ▪ 3 heating zones – 60 seconds each ▪ Cooling zone – 30 seconds 	<p>All exhaust routed to RTO</p>	RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other IBO in RTO bypass mode	<p><u>Normal operation:</u> RTO Stack</p> <p><u>During bypass:</u></p> <ul style="list-style-type: none"> -Zone 1 Bypass Stack Height: 14.0 m Diameter: 0.3 m Flowrate: ~3,000 CFM Temp: ~383 K -Zone 2 Bypass Stack Height: 14.0 m Diameter: 0.45 m Flowrate: ~5,900 CFM Temp: ~453 K
CAN COATING LINE 2					
EU10	Line 2 Decorator Unit	Concord Decorator-Alcoa Serial# 307301 1900 cans-per-minute ²	<ul style="list-style-type: none"> ▪ Use of low-VOC inks. ▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish. ▪ Roll on application ink and overvarnish. 	N/A	Roof vent

EU11	Line 2 Printer Oven (PIN)	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr maximum heat input ▪ 2,400 cans-per-minute² ▪ Operating Temp – 395 – 415 F ▪ Time in oven - 9.16 seconds 	All exhaust routed to RTO	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other PIN in RTO bypass mode</p> <p>Normal operation: RTO Stack During bypass: Bypass Stack Height: 14.3 m Diameter: 0.38 m Flowrate: ~5,000 CFM Temp: ~448 K</p>
EU12	Line 2 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Fisher Model 102MSH MARK3 ▪ 7 units @ 350 cans per minute² ▪ High transfer efficiency spray technique (>94%) 	<ul style="list-style-type: none"> ▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings. ▪ Filters with 99% filtration efficiency on exhaust ▪ Capture systems on LSM boxes and conveyor to IBO. Both routed to RTO, except during bypass. 	<p>N/A</p> <p>Normal operation: RTO Stack During bypass: LSM 2A</p>
EU13	Line 2 Internal Bake Oven (IBO)	<ul style="list-style-type: none"> ▪ Greenbank Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr maximum heat input ▪ 3,000 cans-per-minute² ▪ Operating Temp – 395-400F ▪ 3 heating zones – 60 seconds each ▪ Cooling zone – 30 seconds 	All exhaust routed to RTO	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other IBO in RTO bypass mode</p> <p>Normal operation: RTO Stack During bypass: -Zone 1 Bypass Stack Height: 14.0 m Diameter: 0.3 m Flowrate: ~3,000 CFM Temp: ~383 K -Zone 2 Bypass Stack Height: 14.0 m Diameter: 0.45 m Flowrate: ~5,900 CFM Temp: ~453 K</p>
REGENERATIVE THERMAL OXIDIZER				

EU14	Regenerative Thermal Oxidizer	<ul style="list-style-type: none"> ▪ Anguil Model 550 ▪ Three-bed regenerative thermal oxidizer ▪ Natural-gas fired – up to 15 MMBtu/hr ▪ Guaranteed 98 control efficiency for VOC³ ▪ Combustion chamber temperature: 1550 – 1700 F 	-Low NOx Burners -Supplemental Fuel Injection System	N/A	Height: 18.3 m Diameter: 1.83 m Flow: 55,000 SCFM Temp: 350 F	
	Baghouse/Dust Collector (part of RTO system)	<ul style="list-style-type: none"> ▪ Donaldson Torit CFE 5-80 ▪ 25,000 SCFM ▪ Pulse jet cartridge filter system for EU8 & EU12 	Not operational during bypass		Exhausts to RTO	
CAN COATING LINE 3						
EU15	Line 3 Can Washer	<ul style="list-style-type: none"> ▪ Greenbank Torrent One ▪ 3000 cans per minute 	<ul style="list-style-type: none"> ▪ Can washing solution limitations ▪ Mist elimination system (Stage 2) 	N/A	Stack: Height: 17.4 m Diameter: 0.46 m Exit Velocity: 12.36 m/s	
EU16	Line 3 Rim Coater with UV Cure	UVio 36" Rim-Up Integrated Mass Rim Coating (IMRC) System	<ul style="list-style-type: none"> ▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings and low-VOC coatings. ▪ Use of UV curing. 	N/A	None	
EU17	Line 3 Decorator Unit #31	<ul style="list-style-type: none"> ▪ Stolle Concord 24MRT-8 Color Decorator ▪ 2,000 cans-per-minute ▪ 8-gallon overvarnish tank 	<ul style="list-style-type: none"> ▪ Use of low-VOC inks. ▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish. ▪ Roll on application ink and overvarnish. ▪ Close capture system on ink and overvarnish application areas routed to RTO 	RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other decorator in RTO bypass mode	<p>Normal operation: RTO Stack</p> <p>During bypass: Line 3 Decorator Bypass Stack</p> <p>Normal/bypass: Fugitives through two decorator room vents: Height: 13.7 m Diameter: 0.91 m Exit velocity: 3.59 m/s</p>	

EU18	Line 3 Decorator Unit #32	<ul style="list-style-type: none"> ▪ CMbE Reformat ▪ 2,000 cans-per-minute ▪ 8-gallon overvarnish tank 	<ul style="list-style-type: none"> ▪ Use of low-VOC inks. ▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish. ▪ Roll on application ink and overvarnish. ▪ Close capture system on ink and overvarnish application areas routed to RTO 	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other decorator in RTO bypass mode</p>	<p><u>Normal operation:</u> RTO Stack <u>During bypass:</u> Line 3 Decorator Bypass Stack Normal/bypass: Fugitives through two decorator room vents: Height: 13.7 m Diameter: 0.91 m Exit velocity: 3.59 m/s</p>
EU19	Line 3 Decorator Solvent Cleaning	<ul style="list-style-type: none"> ▪ Parts Washers (isopropanol) ▪ Hand cleaning of decorator units (isopropanol) 	<ul style="list-style-type: none"> ▪ Pollution prevention ▪ Capture system operating during cleaning 	N/A	<p>Two decorator room vents: Height: 13.7 m Diameter: 0.91 m Exit velocity: 3.59 m/s</p>
EU20	Line 3 Printer Oven (PIN) #31	<ul style="list-style-type: none"> ▪ Greenbank Pintec One – Omega ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr maximum heat input ▪ 2,400 cans-per-minute² ▪ Operating Temp – 395 – 415 F ▪ Time in oven - 9.16 seconds 	<p>All exhaust routed to RTO</p>	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other PIN in RTO bypass mode</p>	<p><u>Normal operation:</u> RTO Stack <u>During bypass:</u> PO311 Bypass Stack Height: 14.3 m Diameter: 0.38 m Flowrate: ~5,000 CFM Temp: ~448 K</p>
EU21	Line 3 Printer Oven (PIN) #32	<ul style="list-style-type: none"> ▪ Greenbank Pintec One – Omega ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr maximum heat input ▪ 2,400 cans-per-minute² ▪ Operating Temp – 395 – 415 F ▪ Time in oven - 9.16 seconds 	<p>All exhaust routed to RTO</p>	<p>RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other PIN in RTO bypass mode</p>	<p><u>Normal operation:</u> RTO Stack <u>During bypass:</u> PO312 Bypass Stack Height: 14.3 m Diameter: 0.38 m Flowrate: ~5,000 CFM Temp: ~448 K</p>

EU22	Line 3 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ CMbE – 3200 Dual Turret LSM ▪ 9 units @ max 350 cans per minute ▪ Nordson Airless spray technology ▪ Includes Respray/Supersorter 	<ul style="list-style-type: none"> ▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings. ▪ Filters with 99% filtration efficiency on exhaust ▪ Capture systems on LSM boxes and conveyor to IBO. Both routed to RTO, except during bypass. 	N/A	<p><u>Normal operation:</u> RTO Stack</p> <p><u>During bypass:</u> Line 3 LSM Bypass Stack Line 3 LSM Conveyor Bypass Stack</p>
EU23	Line 3 Internal Bake Oven (IBO)	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr maximum heat input ▪ 3,000 cans-per-minute² ▪ Operating Temp – 395-400F ▪ 3 heating zones – 60 seconds each ▪ Cooling zone – 30 seconds 	All exhaust routed to RTO	RTO bypass allowed for RTO maintenance purposes up to 200 hours per year; cannot operate with any other IBO in RTO bypass mode	<p><u>Normal operation:</u> RTO Stack</p> <p><u>During bypass:</u> -IBO321 Zone 1 Bypass Stack Height: 14.0 m Diameter: 0.3 m Flowrate: ~3,000 CFM Temp: ~383 K -IBO322 Zone 2 Bypass Stack Height: 14.0 m Diameter: 0.45 m Flowrate: ~5,900 CFM Temp: ~453 K</p>
INSIGNIFICANT EMISSION UNITS¹					
	Diesel Emergency Fire Pump Engine	<ul style="list-style-type: none"> ▪ Clarke Model JUGH-UFG8 149 hp, 9.5 gal/hr 	None		Fire Pump Stack
	Line 1 and 2 Bodymakers	<ul style="list-style-type: none"> -18 units at 220 cans/min -3960 cans/minute 			
	Propane Gas Tank	500 gallons			
	Space Heating	Eighteen natural gas-fired space heaters 80,000 Btu/hr each			
	Storage and Dispense of Acid Solution	Stored in 200-gallon, enclosed, plastic totes			

Line 3 Can Washer Drying Oven	Greenbank "Tornado" 2.59 MMBtu/hr natural gas-fired dryer 3,000 cans-per-minute	DRY361 Height: 13.7 m Diameter: 0.45 m
Hot Water Heater Line 1/2	Unilux QCCS-SKI-200828A-D-NS Natural gas-fired hot water heater 3.25 MMBtu/hr	HWH151 Height: 13.7 m Diameter: 0.4 m
Hot Water Heater Standby ⁴	Unilux QCCS-SKI-200828A-D-NS Natural gas-fired hot water heater 3.25 MMBtu/hr	HWH251 Height: 13.7 m Diameter: 0.4 m
Hot Water Heater Line 3	Unilux QCCS-SKI-200828A-D-NS Natural gas-fired hot water heater 3.25 MMBtu/hr	HWH351 Height: 13.7 m Diameter: 0.4 m
Copper Press Sys	Minster Stolle DACH-165	
Bodymakers & Trimmers	CMB 5610 – Fixed 24.5" Stroke	
Necker	CMB 3400	
Lacquer storage tank	10,000 gallons	
Over-varnish storage tank	10,000 gallons	
Wastewater Pretreatment System	Two treatments trains: -60 GPM each -No aeration processes. The process units includes oil coalescing separator, reaction tanks, clarifiers, neutralizing tanks, and filter press. -Additives/reagents will all be in liquid form. -Sludge disposal unit will be completely enclosed.	
Waste Oil Tank	8000 gallons	

¹Emission unit designations above are specific to the New Source Review and do not affect emission unit designations in Crown's Air Operating Permit. For example, the diesel fire pump engine did not require New Source Review due to its size and are therefore designated as insignificant emission units for the purposes of this permit. However, emergency engines are significant emission units under the Title V Air Operating Permit program as they are subject to federal applicable requirements.

²Per email from Michael Herron, Crown on 4/6/21 – The production capacity of Lines 1 and 2 are limited by the printers at 1900 cans per minute for each line.

³Guarantee is for total gaseous organic concentration as measured by Method 25A.

⁴Standby hot water heater only used when one of the other hot water heaters is not operating. Changes to this operational schedule may require additional modeling to assure compliance with NAAQS.

6. Emission Increases

The worst-case emissions increase was calculated by Crown on an hourly, daily, and yearly basis and take into account the bypass scenario allowed under the current permit. On an hourly and daily basis, worst case emissions occur during a bypass scenario. Although individual TAP/HAP emissions will increase, emissions from volatile organic compounds (VOC) will not increase as the VOC content of the reformulated overvarnish is lower than the original overvarnish.

Table 3. Emission Increases (Project Emissions)

Pollutant	Classification (Criteria ^a /HAP ^b /TAP ^c)	Emission Rate (lb/hr)	Emission Rate (lb/day)	Emission Rate (lb/yr)
PM (Total Particulate)	Criteria	NA	NA	NA
PM ₁₀ (Total Particulate) (<= 10 µm)	Criteria	NA	NA	NA
PM _{2.5} (Fine Particulate (<=2.5 µm))	Criteria	NA	NA	NA
Ground Level Ozone (O ₃)	Criteria	NA	NA	NA
VOC ^d (Volatile Organic Compounds)	Criteria	0	0	0
SO ₂ (Sulfur Dioxide)	Criteria/TAP	NA	NA	NA
NO _x (Nitrogen Oxides)	Criteria/TAP	NA	NA	NA
CO (Carbon Monoxide)	Criteria/TAP	NA	NA	NA
Lead	Criteria/HAP/TAP	NA	NA	NA
Hazardous Air Pollutants (total HAP)		0.04	1.0	240
Cresols (mixture) (o-, m-, p-)	HAP/TAP	0.007	0.16	38
Ethyl benzene	HAP/TAP	0.0005	0.01	3
Ethylene glycol	HAP/TAP	0.002	0.04	9
Methanol	HAP/TAP	0.03	0.73	174
Sodium hydroxide	TAP	0.0001	0.003	0.9
Toluene	HAP/TAP	0.00001	0.0003	0.07
Xylene (mixture) (o-, m-, p-)	HAP/TAP	0.003	0.06	15

^a EPA has established national ambient air quality standards (NAAQS) for six of the most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as “criteria” air pollutants (or simply “criteria pollutants”).

^b HAP means Hazardous Air Pollutant. Hazardous Air Pollutants are those known to cause cancer and other serious health impacts and are regulated under the federal Clean Air Act.

^c TAP means any toxic air pollutant regulated in Washington and listed in WAC 173-460-150.

^d VOC is regulated as a Criteria Air Pollutant because it is a precursor to Ground Level Ozone (O₃)

Table 4: Facility-Wide Potential to Emit (Tons/Year)

Pollutant	Facility-wide Emissions by Process Type				Total
	Combustion Units ¹	Can Washing	Can Coating Lines	Solvent Usage	
CO	17.7	-	-	-	17.7
NO _x	21.0	-	-	-	21.0
PM	1.9	-	0.5	-	2.3
SO ₂	0.15	-	-	-	0.1
VOC	1.3	-	108.0	71.1	180.5
HAP	0.5	0.6	5.2	-	6.3
Cresols	-	-	0.02	-	0.02
Ethyl benzene	-	-	0.001	-	0.001

Ethylene glycol	-	-	0.005	-	0.005
Ethylene glycol monobutyl ether	-	-	55.7	-	55.7
Formaldehyde	0.02	-	2.2	-	2.2
Hydrofluoric acid	-	0.14	-	-	0.14
Methanol	-	-	0.1	-	0.1
Isopropyl alcohol	-	-	-	71.1	71.1
Sodium hydroxide	-	-	0.0004	-	0.0004
Sulfuric acid	-	0.42	-	-	0.42
Toluene	-	-	0.00004	-	0.00004
Xylene	-	-	0.01	-	0.01

¹ Combustion unit emissions include NSR exempt units. Only emissions from two hot water heaters are included as one is a backup unit.

7. Administrative Requirements for NOC Applications

NOC applications are subject to filing fees according to ORCAA Rule 3.3(b) and may incur additional NOC processing fees at an hourly rate according to ORCAA Rule 3.3(c). Applicable NOC filing fees for Crown’s NOC application were paid prior to ORCAA commencing processing of the application. Additional NOC processing fees may apply and will be determined and assessed prior to issuing a Final Determination and the Approval Order (a.k.a.: Air Permit).

NOC applications are subject to a 15-day public notice and an opportunity to request a 30-day public comment period and opportunity for a public hearing. Public notice of Crown’s NOC application was posted on ORCAA’s website on October 30, 2023. The time period for filing comments on the application and requests for a public comment period expired on November 14, 2024. No comments on the NOC application or requests for a public comment period were received during the NOC application noticing period.

This proposal did not trigger any of the criteria for a mandatory 30-day public comment period per ORCAA Rule 6.1.3(b).

8. SEPA Review

The State Environmental Policy Act (SEPA) under Chapter 197-11 WAC is intended to provide information to agencies, applicants, and the public to encourage the development of environmentally sound proposals. The goal of SEPA is to assure that significant impacts are mitigated.

As this proposal involves a coating reformulation and does not involve any physical changes to existing equipment or change in use beyond that previously existing, the action is exempt from SEPA under 197-11-800(3).

9. Criteria for Approval

ORCAA's Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, establish the following general criteria for approving new stationary sources and modifications to existing stationary sources of air pollution in ORCAA's region:

1. **Performance Standards** - Any new stationary source or modification will likely comply with applicable air-performance standards such as the federal new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAPs), and any performance standards adopted under chapter 70A.15 RCW;
2. **BACT** - The new or modified stationary source is controlled to a level that meets the standard of "Best Available Control Technology" (BACT);
3. **Ambient Air Quality** – Any increase in air emissions will not cause or contribute to violation of any ambient air quality standard;
4. **Federal Air Permitting Requirements** – All applicable federal air permits, if required, are secured;
5. **Washington Air Toxics Regulations** - If there are increases in toxic air pollutant (TAP) emissions, the requirements of Washington's Controls for New Sources of Toxic Air Pollutants under Chapter 173-460 WAC are met; and,
6. **Public Outreach** – Public notice and comment requirements in ORCAA's regulations and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6 are met.

The following sections provide more detail on each criterion.

10. Applicable Performance Standards (Summary)

ORCAA's Rule 6.1.4(a)(1) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require a finding that any new or modified stationary source will likely comply with applicable state, federal and local performance standards for air emissions including emission standards adopted under chapter 70A.15 RCW, emissions standard of ORCAA, and federal emission standards including New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards). The performance standards in Table 5 were determined applicable to the proposal to use PFAS Matte Over Varnish PPG 9201-811F (a PFAS-free overvarnish). The performance standards in Table 6 were determined relevant to the proposed use of PFAS Matte Over Varnish PPG 9201-811F, but inapplicable. A comprehensive list of applicable performance standards that apply to all stationary sources of air pollution located at the facility, as well as general air regulations and standards that apply, are included in the Appendix.

Table 5: Applicable Performance Standards specific to the proposal to use PFAS Matte Over Varnish PPG 9201-811F in the existing decorators

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	discussion/determination
40 CFR Part 60, Subpart WW	New Source Performance Standards - Standards of Performance of the Beverage Can Surface Coating Industry. Applies to beverage can surface coating lines with the following affected facilities: new, modified, or reconstructed exterior base coat operation, overvarnish coating operation, and inside spray coating operation.	Applies to the overvarnish and inside spray coating operations.

Table 6: Relevant Performance Standards Determined Inapplicable with respect to the proposal to use PFAS Matte Over Varnish PPG 9201-811F in the existing decorators

Regulation Title Citation	Relevant Performance Standard Determined Inapplicable	Basis
40 CFR Part 63 Subpart EEEE	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)	Not applicable. Crown has a federally enforceable voluntary limit on emissions of hazardous air pollutants that established Crown as a minor source of HAPs.
40 CFR Part 63 Subpart KKKK	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans	Not applicable. Crown has a federally enforceable voluntary limit on emissions of hazardous air pollutants that established Crown as a minor source of HAPs.
40 CFR Part 63 Subpart MMMM	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products	Not applicable. Crown has a federally enforceable voluntary limit on emissions of hazardous air pollutants that established Crown as a minor source of HAPs.
40 CFR Part 63, Subpart HHHHHH	National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources	Not applicable. Crown is not engaged in: <ul style="list-style-type: none"> a. Paint stripping with methylene chloride; b. Autobody refinishing operations; or c. Spray application of coatings containing chromium, lead, manganese, nickel, or cadmium.

11. Best Available Control Technology (BACT)

ORCAA Rule 6.1.4(a)(2) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require the finding that a new source or modification to an existing source of air pollution in an attainment or unclassifiable area will employ best available control technology for all pollutants (BACT) not previously emitted or whose emissions would increase as a result of the new source or modification.

New sources of air pollution and modifications to existing sources of air pollution are required to use BACT to control all pollutants not previously emitted, or those for which emissions would increase as a result of the new source or modification. BACT is defined in WAC 173-400-030 as, *“an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70A.15 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant.”*

This proposal will not result in an increase in emissions of criteria pollutants; therefore, a BACT analysis is not required. BACT will remain as determined in previous Notices of Construction. See Section 13 for T-BACT determination.

12. Ambient Impact Analysis (Criteria Pollutants)

ORCAA's Rule 6.1.4(a)(3) and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6, require emissions from any new stationary source or modification not delay the attainment date of an area not in attainment, nor cause or contribute to a violation of any Ambient Air Quality Standard (AAQS). ORCAA's current Dispersion Modeling Guidance (2009) recommends this approval criteria be demonstrated using dispersion modeling techniques when Potential to Emit (PTE) of any pollutant with an ambient standard is above ORCAA's adopted significant emission level for the pollutant. Any pollutant with a PTE below its significant emission level can be considered insignificant with respect to maintaining the AAQs.

This proposal will not result in an increase in emissions of criteria pollutants; therefore, the proposal is not expected to cause or contribute to a violation of any AAQS.

13. Ambient Impact Analysis (Toxic Air Pollutants)

Washington's regulation titled Controls for New Sources of Toxic Air Pollutants (Air Toxics Rule) under Chapter 173-460 of the Washington Administrative Code applies to new stationary sources of Toxic Air Pollutants (TAP), including modifications to existing emissions units that increase TAP. The purpose of the Air Toxics Rule is to, "... maintain such levels of air quality as will protect human health and safety." The TAPs covered under the Air Toxics Rule include carcinogens and non-carcinogens. TAP emissions increases for determining applicability are the

increases attributable to the new or modified emissions unit - Decreases from existing emissions units are not allowed to be subtracted from project-attributable TAP increases when determining applicability. Also, the Air Toxics Rule provides that review of modifications are limited to the emission unit or units proposed to be modified and the TAPs whose emissions would increase as a result of the modification.

The Air Toxics Rule has two independent requirements for new sources and modifications that increase TAP emissions above de-minimis levels:

- 1) **tBACT:** The new or modified emission units must use Best Available Control Technology to control TAP emissions (WAC 173-460-040(3)(a)).
- 2) **Ambient Impact:** The NOC application must demonstrate that any increase in TAP from the new or modified emission units are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects (WAC 173-460-070).

tBACT

The tBACT requirement applies to any new or modified emission units that triggers the Air Toxics Rule (results in a TAP increase above de-minimis levels), regardless of facility-wide or “net” TAP emissions. The term tBACT means Best Available Control Technology, as that term is defined in WAC 173-400-030, but applied to control of TAP (see BACT definition in Section 11).

Crown proposes to continue to use the capture and control system previously approved for the decorators and PIN ovens (see Final Determinations for NOC# 20NOC1451 and NOC# 21NOC1483) for control of organic TAPs. The Line 1 and 2 decorators are the only emission units that do not currently vent to the RTO. Crown has determined that routing emissions from the Line 1 and 2 decorators to the cold vent system is not economically feasible (on a cost per ton basis) for this project. Most of the emissions from overvarnish application are emitted in the PIN ovens during the curing process and the curing ovens are vented to the RTO. The use of pollution prevention measures (roller application) is used to prevent emissions of silica from forming.

Ambient Impact Review

The Air Toxics Rule provides a multi-tiered, screening approach under WAC 173-460-080 to assess health impacts and demonstrate compliance with the ambient impact requirement under WAC 173-460-070, which is that TAP increases must be sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

The “First Tier Review” (Tier 1 Review) is a two-step process. First, the emissions increase of each TAP is compared to its unique Small Quantity Emission Rate (SQER). SQERs are listed for each TAP under WAC 173-460-150. An SQER is the level of emissions of a TAP below which dispersion modeling is not required to demonstrate compliance with the ambient impact requirement. TAP emissions increases used in this first step must be based on the maximum potential to emit considering control or reduction in emissions achievable using the air pollution control technology or methods proposed to meet the tBACT requirement. Any TAP with an increase below its SQER can be presumed to be in compliance with the ambient impact

requirement. If this is the outcome, further analysis is not required for that TAP. However, TAPs with emissions increases above their SQER must undergo the second step of the Tier 1 Review.

The second step of the Tier 1 Review requires evaluating TAP impacts against Acceptable Source Impact Levels (ASIL) and is referred to as an ASIL Analysis. An ASIL is the adopted health-based concentration for a TAP below which can be presumed as meeting the ambient impact requirement of WAC 173-460-070. ASILs are provided for each TAP under WAC 173-460-150. An ASIL analysis typically involves using an ambient air dispersion model to estimate ambient concentrations resulting from TAP emissions increases and considering air dispersion and local meteorological characteristics of the source. If the modeled impact of the increase in emissions of a TAP does not exceed its corresponding ASIL, the ambient impact requirement of WAC 173-460-070 may be considered met and the First Tier Review is completed for that TAP.

Emissions rates used to support an ASIL Analysis must be based on the maximum potential to emit considering control or reduction in emissions achievable using the air pollution control technology or methods proposed to meet the tBACT requirement. In addition, the Air Toxics Rule allows TAP reductions from existing emission units not subject to review to be subtracted or “netted out” from TAP increases, provided the reductions are included in the approval order as enforceable voluntary emission limits and meet all the requirements of WAC 173-460-071. These requirements include:

- (1) The voluntary emissions reductions must be enforceable through a regulatory order issued by the air permitting agency.
- (2) The approval order enforcing the voluntary emissions reductions must include monitoring, recordkeeping, and reporting requirements sufficient to ensure the reductions are maintained.
- (3) The agency’s preliminary determination to approve the voluntary emissions reductions are subject to a 30-day public notice and comment period and opportunity for a public hearing.

For pollutants with ambient concentrations found to be greater than their ASIL, a “Second Tier Review” (Tier 2 Review) by the Washington Department of Ecology (Ecology) is required. An application for a Tier 2 Review by Ecology is referred to a Tier 2 petition. Tier 2 petitions must include a Health Impacts Assessment (HRA) and estimated ambient TAP impacts based on refined air dispersion modeling. Ecology will not act on a Tier 2 petition unless a written preliminary determination on the NOC application for the new or modified TAP source and a draft approval order have been completed by the local agency with jurisdiction. Ecology’s review and approval of a Tier 2 petition is contingent on a finding that TAP impacts meet the ambient impact requirement of WAC 173-460-070 that increases in TAP emissions are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects. If Ecology recommends denial of a Tier 2 petition, the permitting authority may not approve the project. The applicant then has the option of submitting a petition for a “Third Tier Review” (Tier 3 Review) by Ecology and a request for a risk management decision.

ORCAA reviewed Crown’s First Tier Review and confirmed that the maximum potential to emit (including during allowed bypass) were below the SQERs. Therefore, the requirement in WAC 173-460-070 to conduct an acceptable source impact analysis is satisfied.

Table 7. Results of the First Tier Review

Pollutant	CAS	SQER Averaging Time	Emission Rate (lb/hr)	Emission Rate (lb/day)	Emission Rate (lb/yr)	SQER	Modeling Required?
Cresols (mixture) (o-, m-, p-)		24-hr		0.16		44	No
Ethyl benzene		annual			3	65	No
Ethylene glycol		24-hr		0.04		30	No
Methanol		24-hr		0.73		1500	No
Sodium hydroxide		1-hr	0.0001			0.015	No
Toluene		24-hr		0.0003		370	No
Xylene (mixture) (o-, m-, p-)		24-hr		0.06		16	No

14. Requirements for Major Stationary Sources and Major Modifications to Major Stationary Sources

Projects that are major stationary sources and major modifications to major stationary sources as defined in 40 CFR 52.21(b) may be subject to permitting requirements under WAC 173-400-700 through 173-400-860.

Crown is not a “Major Stationary Source” as defined in 40 CFR 52.21(b) and not subject to the permitting program required by WAC 173-400-700 through WAC 173-400-860. Therefore, these permitting requirements do not apply.

15. Title V Air Operating Permit (AOP) Implications

The State of Washington program pursuant to Title V of the federal Clean Air Act is governed under Chapter 173-401 WAC, the Washington Air Operating Permit Program. Chapter 173-401 WAC requires existing major stationary sources to operate in compliance with an approved Air Operating Permit (AOP). Major stationary sources are those stationary sources with a potential to emit which is greater than 100 tons per year of any criteria pollutant, greater than 10 tons per year of any hazardous air pollutants (HAP), or greater than 25 tons per year of any combination of HAP.

Based on “Potential to Emit” (PTE) the facility is a “Major Source” under Title V of the federal Clean Air Act for volatile organic compound (VOC) emissions and, therefore, is subject to the requirement that the facility operate under an Air Operating Permit (AOP) issued by ORCAA.

Crown has operated under an AOP since 1998. The current AOP for the facility was issued on September 1, 2016 and is currently operating under an application shield. Crown has submitted a renewal application and requirements from this Order of Approval will be added to the permit during the renewal process.

16. Environmental Justice Considerations

EPA defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The purpose of an EJ review in conjunction with an air permitting action is to ensure no group of people bear a disproportionate share of the negative environmental consequences as the result of the permitting action. Further, ORCAA strives to engage the affected community effectively and meaningfully regarding the permitting action, and to ensure compliance with obligations pursuant to Title VI of the Civil Rights Act. With respect to factoring EJ into air permitting decisions, EPA Region 10 expects air agencies to:

- Identify overburdened communities;
- Engage with communities;
- Evaluate cumulative impacts; and,
- Use available authority to minimize emissions.

However, EPA Region 10 does not expect air agencies to use the Clean Air Act's authorities to address existing disproportional impacts to communities when implementing New Source Review in areas that are "attainment/unclassifiable" with respect to meeting the NAAQS.

The following subsections describe how these expectations from EPA Region 10 were met.

16.1 Identify Overburdened Communities

The initial step in an EJ review is to identify any affected populations or communities of concern and to identify whether they are disproportionately impacted. ORCAA used EPA's environmental justice screening and mapping tool, EJScreen, to answer this first part of this question. An EJScreen Community Report was generated for Thurston County. The Community Report estimates a minority population of 27%, with approximately 4% of the total population speaking Spanish and 8% speaking another Non-English language at home. All demographic indicators were below the 80th percentile for the nation. Likewise, the Community Report indicates that Thurston County is below the 80th percentile for all environmental indicators. Environmental indicators above the 80th percentile are an indication that a community is already disproportionately impacted. Therefore, ORCAA staff's conclusion is that the project impact area does not include any preexisting, overburdened communities. A copy of the Community Report with more detailed information will be filed as part of the supporting documentation for the project.

Preexisting air quality impacts were evaluated based on ambient air quality monitoring data and designation of the area with respect to maintaining compliance with the NAAQS. If air quality in a geographic area meets or is cleaner than a national standard based on ambient air monitoring data, it is called an attainment area and designated "attainment/unclassifiable." Areas may also be presumed "attainment/unclassifiable" based on population density and air pollutant emissions being below certain thresholds. For this case, the project impact area and Thurston County as a whole is designated "attainment/unclassifiable." Therefore, there are no preexisting nonattainment issues identified within the County. The project's criteria emissions

will not cause or contribute to a violation of an AAQS. Therefore, ORCAA staff's conclusion is that there are no indications of any existing disproportional impacts to communities of concern within the project impact area.

16.2 Engage with Communities

Based on the size and scope of the project, and that there are no overburdened communities near the project, ORCAA staff determined the public noticing procedures outlined in Section 7 above are sufficient notifications.

16.3 Evaluate Cumulative Impacts

The air permitting action for this case did not trigger an ambient impact analysis (including a cumulative analysis) under either the Clean Air Act or the Washington Clean Air Act as there was no increase in criteria pollutant emissions. Crown recently completed a cumulative impacts analysis in the permit application for their recent expansion (see NOC# 20NOC1451). Therefore, that air analysis can be considered a cumulative analysis with respect to the NAAQS.

16.4 Use Available Authority to Minimize Emissions

As described elsewhere in this report, ORCAA applied existing New Source Review authorities provided under the Clean Air Act and the Washington Clean Air Act to minimize emissions from the use of PFAS Matte Over Varnish PPG 9201-811F. Principally among these authorities is the requirement to use BACT for controlling emissions. The BACT requirement was applied and corresponding BACT emissions limits are included in the air permit.

17. Conditions of Approval

The following conditions of approval were determined necessary for assuring compliance with applicable air regulations and standards and protecting air quality. Recommended conditions of approval will become effective once the Approval Order is issued:

- 1. Approved Equipment:** The equipment and activities described in Notice of Construction application Nos. 98NOC021, 00NOC034, 00NOC059, 02NOC273, 16MOD1178, 17NOC1261, 19NOC1336, 20NOC1451, 20NOC1454, 21NOC1483, and 23NOC1613, application addendums, and the associated Final Determinations are approved for construction and operation subject to conditions in this Order of Approval.
- 2. Preapproval Required.** Prior approval by ORCAA may be required for the following as specified in ORCAA Rule 6.1:
 - a. Construction, installation, or establishment of any stationary source;
 - b. Modification to any existing stationary source;
 - c. Replacement or substantial alteration of emission control technology installed on an existing stationary source; or,

- d. Deviations from the approved plans, drawings, data, and specifications of the stationary sources listed in the following table:

Table 1. Approved Stationary Source

Stationary Source	Equipment Specifications
Line 1 and 2 Can Washer	<ul style="list-style-type: none"> ▪ Cincinnati Industrial Machinery (CIM) Model #BS1122422-88 C40-2
Line 1 and 2 Can Washer Dryer	<ul style="list-style-type: none"> ▪ Eclipse 440 AH dryer ▪ 2 Natural gas-fired burners, 8.8 MMBtu/hr maximum heat input
Lines 1 and 2 Rim Coating	<ul style="list-style-type: none"> ▪ U.F. Fusion U.V. System Mode DRR-120 ▪ Ultraviolet curing
Line 1 Printer and Decorator	<ul style="list-style-type: none"> ▪ Line 1 - Concord Decorator-Alcoa Serial # D3008
Line 2 Printer and Decorator	<ul style="list-style-type: none"> ▪ Concord Decorator-Alcoa Serial# 307301
Line 1 Printer Oven	<ul style="list-style-type: none"> ▪ OSI Model# 1600-CPM Single Zone ▪ 2 Natural gas-fired burners, 5 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5000 CFM ▪ Exhaust routed to RTO
Line 2 Printer Oven	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 1 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Fisher Model 102MSH MARK3 ▪ 7 units per line ▪ High transfer efficiency spray technique (>94% efficiency) ▪ Enclosed LSM housings with capture system
Line 2 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ Each housing equipped with particulate filter system with at least 99% filtration efficiency ▪ LSM conveyor to the IBO will be equipped with a capture system consisting of a hood and enclosed on all sides ▪ All capture systems routed to RTO
Line 1 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate: ~8,900 CFM ▪ Exhaust routed to RTO
Line 2 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate: ~8,900 CFM

	<ul style="list-style-type: none"> ▪ Exhaust routed to RTO
Line 3 Can Washer	<ul style="list-style-type: none"> ▪ Greenbank Torrent One ▪ Mist elimination system in Stage 2
Line 3 Rim Coating	<ul style="list-style-type: none"> ▪ UVio 36" Rim-Up Integrated Mass Rim Coating System ▪ Ultraviolet curing
Line 3 Decorator Unit #31	<ul style="list-style-type: none"> ▪ Stolle Concord 24MRT-8 Color Decorator ▪ 2,000 cans-per-minute ▪ Room vent exhaust flowrate: ~4950 CFM ▪ Close capture system on ink and overvarnish application areas routed to RTO
Line 3 Decorator Unit #32	<ul style="list-style-type: none"> ▪ CMbE Reformat ▪ 2,000 cans-per-minute ▪ Room vent exhaust flowrate: ~4950 CFM ▪ Close capture system on ink and overvarnish application areas routed to RTO
Line 3 Printer Oven #31	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 3 Printer Oven #32	<ul style="list-style-type: none"> ▪ Greenbank "Pintec One – Omega" ▪ High efficiency natural gas-fired burner - 2.59 MMBtu/hr max. heat input ▪ Exhaust Flowrate: ~5,000 CFM ▪ Operating temperature: 395 – 415 F ▪ Exhaust routed to RTO
Line 3 Lacquer Spray Machines (LSM)	<ul style="list-style-type: none"> ▪ CMbE 3200 Dual Turret LSM ▪ 9 units ▪ High transfer efficiency spray technique (>94% efficiency) ▪ Enclosed LSM housings with capture system ▪ Each housing equipped with particulate filter system with at least 99% filtration efficiency ▪ LSM conveyor to the IBO will be equipped with a capture system consisting of a hood and enclosed on all sides ▪ All capture systems routed to RTO
Line 3 Inside Bake Oven	<ul style="list-style-type: none"> ▪ Greenbank NIBO Serial# 15241 ▪ High efficiency natural gas-fired burners - 3.93 MMBtu/hr max. heat input ▪ Operating Temp – 395-400F ▪ Exhaust Flowrate Zone 1: ~2,995 CFM ▪ Exhaust Flowrate Zone 2: ~6000 CFM

	<ul style="list-style-type: none"> ▪ Exhaust routed to RTO
Line 3 Decorator Solvent Usage	<ul style="list-style-type: none"> ▪ Isopropanol (decorator cleaning and parts washer) ▪ Room vent exhaust flowrate (two): ~4950 CFM each
Regenerative Thermal Oxidizer (RTO)	<ul style="list-style-type: none"> ▪ Anguil Model 550 ▪ Three-bed regenerative thermal oxidizer ▪ Natural-gas fired – up to 15 MMBtu/hr ▪ Guaranteed 98 control efficiency for VOC ▪ Dust collector pre-filter for Line 1 & 2 LSMs

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.2(l)]

3. Facility-Wide VOC Emission Limits. Facility-wide emissions of volatile organic compounds must not exceed 180.5 tons per 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

4. Annual Formaldehyde Emission Limits.

a. Emissions of formaldehyde from Can Coating Lines 1 and 2 must not exceed 2,299 pounds per 12-month rolling period; and

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

b. Facility-wide emissions of formaldehyde must not exceed 4,378 pounds per 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

5. Annual Emission Limits Monitoring. Compliance with the emission limits in Conditions 3 and 4 must be monitored at least monthly by computing the actual amount of emissions over the previous month and consecutive 12-month period. Emissions must be calculated using the following methods or alternative method if approved by ORCAA:

a. **Material Use and Composition.** Monthly use of inks, lacquers, varnishes, cleaning solvents, and other materials containing VOCs and formaldehyde must be monitored as follows:

- i. Usage of each material must be monitored at least monthly in terms of totals pounds used, total gallons used, or both.
- ii. Material usage records must be sufficient to determine the amount of each material applied during bypass of the RTO.
- iii. The VOC and HAP composition of each unique material must be determined based on safety data sheets (SDS) and/or Certificates of Analysis specific to each material.

b. **Can Coating Emissions.** Emissions from coating application (including rim coat, ink, overvarnish, and inside lacquer) must be calculated as follows:

- i. VOC emissions must be calculated based on actual usage and composition for each material and using material balance methods and capture and control efficiency of the RTO, if applicable.
- ii. Formaldehyde emissions which are formed in the curing ovens must be calculated based on the actual amount of cans processed through each can coating line or the

amount of coating or coating solids applied and using emission factors based on the most recent performance test or other factors as approved by ORCAA.

Formaldehyde emissions from curing must be included in the total VOC emissions calculated for the can coating lines.

- iii. Emission calculations based on the actual amount of cans produced or coating material applied must include spoilage. Spoilage means the cans processed in the can coating line that are discarded for defects or other reasons and are not included in the facility can production count.
- iv. VOC emission calculations based on capture and control efficiency of the RTO must use the capture and control efficiency of the most recent performance test, unless required monitoring in Condition 34 and Condition 37 indicate that the capture and control efficiency determined during the most recent performance test was not continuously maintained.
- c. **Solvent Usage.** VOC emissions from solvent cleaning must be calculated based on material balance and actual usage and composition of each material.
- d. **Combustion Emissions.** VOC and formaldehyde emissions from combustion of natural gas or other fuels must be calculated based on the amount of fuel combusted during the period and emission factors from the most current version of the EPA document, Compilation of Air Pollutant Emission Factors, AP-42.
- e. **Storage Tanks.** VOC emissions from storage tanks containing VOC compounds must be calculated based on the actual throughput during the period and emission calculation methods from the most current version of the EPA document, Compilation of Air Pollutant Emission Factors, AP-42.
- f. **Credit for Waste.** The permittee may credit shipments of waste in the mass balance calculations in (b) and (c) only when a characterization test has been performed on each container of waste, or on a container representing a group of containers filled from one batch of waste.

[Regulatory Basis: ORCAA Rule 8.11]

- 6. Annual Emission Limit Recordkeeping:** The following records must be maintained for at least five years from the date the record originated, or as specified, and made available for inspection upon request:
- a. Records of monthly and 12-month rolling totals for VOC and formaldehyde emissions as required by Condition 5;
 - b. Records of material and fuel usage, composition data, and any other data used to calculate emissions; and
 - c. Safety data sheets (SDS) for all VOC-containing materials used in the process.

[Regulatory Basis: ORCAA Rule 8.11]

- 7. Can Washing Solution Requirements.** Can coating solutions that meet the following criteria are approved for use by the permittee:
- a. The can washing solutions must not contain any TAPs (as defined by Chapter 173-460 WAC) except for sulfuric acid and hydrogen fluoride;
 - b. The can washing solutions must not contain more than 60 percent sulfuric acid by weight, as applied; and

c. The can washing solutions must not contain more than 5 percent hydrogen fluoride by weight, as applied.

[Regulatory Basis: (a) ORCAA Rule 6.1.2(l); (b) and (c) ORCAA Rule 6.1.4(a)(2)]

8. Reformulated or New Can Washing Solution Monitoring. The permittee must review each new or reformulated can washing solution prior to use to assure it meets the criteria in Condition 7. The permittee may show compliance with Condition 7 by documenting that the can washing solution as purchased meets the criteria.

[Regulatory Basis: ORCAA Rule 8.11]

9. Reformulated or New Can Washing Solutions Recordkeeping. Records of all determinations for reformulated or new can washing solutions under Condition 8 must be maintained for at least five years from the date the record originated and made available or inspection upon request.

[Regulatory Basis: ORCAA Rule 8.8]

10. Can Washing Operation and Maintenance Plan. Prior to startup of the Line 3 Can Washer, the owner or operator shall develop an Operations and Maintenance (O&M) plan to include procedures specific to operation and maintenance of the Line 1 and 2 Can Washer, Line 1 and 2 Can Washer Dryer, and the Line 3 Can Washer.

[Regulatory Basis:

Both can washers - ORCAA Rule 8.8;

Line 1 and 2 Washer – WAC 173-460-040(9)]

11. Approved Coatings / Material Limits. Coatings that meet the following criteria are approved for use by the permittee:

a. Rim coat varnish must be applied using roll on application and cured by ultraviolet lamps. The varnish must not contain any HAPs or TAPs; and VOC content must be less than 0.01 pounds per gallon.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

b. Inks must be applied via using roll on application and contain no TAPs or HAPs except for formaldehyde.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

c. Overvarnish and inside lacquer must meet the applicable VOC limits in Condition 16 and:

Coating Type	Overvarnish	Inside Lacquer
i. The coating must not contain any TAPs ¹ or HAPs ² except for...	2-butoxyethanol; formaldehyde; cresols (o-, m-, p-); ethyl benzene; ethylene glycol; methanol; silica; sodium hydroxide; toluene; xylene (o-, m-, p-)	2-butoxyethanol; formaldehyde; glycol ethers

ii. The ethylene glycol monobutyl ether (EGBE) (CAS 111-76-2) content of the coating must be no more than...	7.4% by weight	7.4% by weight
iii. The coating contains...	no glycol ethers	no more than 0.5% by weight glycol ethers
iv. The coating contains...	(A) no more than 0.01004 % by weight cresols (mixture) (m-, o-, p-) (B) no more than 0.00072% by weight ethylbenzene (C) no more than 0.00242% by weight ethylene glycol (D) no more than 0.04582% by weight methanol (E) no more than 0.0000502% by weight sodium hydroxide (F) no more than 0.000019% by weight toluene (G) no more than 0.00407% by weight xylene (mixture) (m-, o-, p-)	(A) no cresols (mixture) (m-, o-, p-) (B) no ethylbenzene (C) no ethylene glycol (D) no methanol (E) no sodium hydroxide (F) no toluene (G) no xylene (mixture) (m-, o-, p-)
v. Total amount of coating used shall not exceed...	187,000 gallons per consecutive 12-month period	574,344 gallons per consecutive 12-month period
vi. The coating...	Is applied by roll on application	May be spray applied

¹ as defined by Chapter 173-460 WAC

² as defined by the Federal Clean Air Act

[Regulatory Basis:

i, iv, v, vi - ORCAA Rule 6.1.2(l);

ii. ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080;

ii. - Overvarnish - ORCAA Rule 6.1.2(l), ORCAA Rule 6.1.4(a)(2);

ii. - Inside Lacquer – ORCAA Rule 6.1.2(l)]

12. Material Use Limit Monitoring: Compliance with the material use limits in Condition 11(c)(v) must be monitored at least monthly by calculating the actual amount of inside lacquer and overvarnish used during the previous month and 12-consecutive month period.

[Regulatory Basis: ORCAA Rule 8.11]

13. Material Use Limit Recordkeeping. Records of monthly and 12-month rolling totals of material usage as required by Condition 12 must be maintained for at least five years from the date the record originated and made available or inspection upon request.

[Regulatory Basis: ORCAA Rule 8.8]

14. Reformulated or New Coating Materials Monitoring. The permittee must review each new or reformulated coating material prior to use to assure it meets the criteria in Condition 11.
[Regulatory Basis: ORCAA Rule 8.11]

15. Reformulated or New Coating Materials Recordkeeping. Records of all determinations for reformulated or new materials under Condition 14 must be maintained for at least five years from the date the record originated and made available or inspection upon request.
[Regulatory Basis: ORCAA Rule 8.8]

16. VOC Coating Limits. The permittee must not discharge or cause the discharge of VOC emissions to the atmosphere that exceed the following volume-weighted calendar-month average emissions:

- a. 0.46 kilogram of VOC per liter of coating solids (3.84 pounds of VOC per gallon of coating solids) from each over-varnish coating operation; and,
- b. 0.89 kilograms of VOC per liter of coating solids (7.43 pounds of VOC per gallon of coating solids) from each two-piece can inside spray coating operation.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); 40 CFR Part 60.492]

17. VOC Coating Limit Compliance Methods. The permittee must conduct a performance test each calendar month using the procedures described in §60.493(b) to monitor compliance with the emission limits in Condition 16.
[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); 40 CFR Part 60.493(b)]

18. VOC Coating Limit Quarterly Reports. The permittee must identify, record, and submit quarterly reports to ORCAA of each instance in which the volume weight average of the total mass of VOC per volume of coating solids, is greater than the limit specified in Condition 16. The reports must be submitted no later than 30 days after the end of each calendar quarter. If no such instances occur during a particular quarter, a report stating this must be submitted to ORCAA semiannually.
[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.11; 40 CFR Part 60.495(b)]

19. VOC Coating Limit Recordkeeping. Records of all data and calculations used to determine VOC emissions for purposes of the monthly compliance demonstrations required by Condition 17 must be maintained at the plant site for a period of at least five years.
[Regulatory Basis: ORCAA Rule 6.1.4(a)(1); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.11; 40 CFR Part 60.495(d)]

20. Line 1 and 2 Ethylene Glycol Monobutyl Ether (EGBE) (CAS 111-76-2) Limits. The following limits apply to Can Coating Lines 1 and 2:

- a. Emissions of EGBE during normal operation must not exceed 225.2 pounds per day; and
- b. Emissions of EGBE during bypass must not exceed 424.9 pounds per day.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

21. Line 1 and 2 EGBE Limits Monitoring. The permittee must develop an ethylene glycol monobutyl ether (EGBE) monitoring plan that describes the methods the permittee will use

to assure continuous compliance with the limit in Condition 20. The plan must be revised, if needed, and must be implemented at all times Can Manufacturing Line 3 is operating.
[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 6.1.4(a)(5); 173-460-080(3)]

22. Line 1 and 2 EGBE Limits Recordkeeping. Records of monitoring conducted per the monitoring plan in Condition 21 must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.
[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-080(3)]

23. Curing Ovens. The following limits and requirements apply to the Line 2 Pin Oven, Line 1 Inside Bake Oven, Line 2 Inside Bake Oven, Line 3 Printer Oven #31 and #32, and Line 3 Inside Bake Oven at the facility:

- a. **Approved Fuel:** The curing ovens may combust only natural gas unless prior approval is granted by ORCAA.
[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]
- b. **Operation and Maintenance:** Operation and maintenance procedures recommended by the manufacturer for maintaining proper combustion must be followed. A copy of the recommended operation and maintenance procedures shall be kept on-site.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

- c. **Tune-ups:** Combustion systems must be tuned-up to meet the NO_x and CO emissions levels stated below or the manufacturer’s recommended or guaranteed operating emissions levels, whichever levels result in the least emissions of NO_x and CO. The ovens must be tuned in the first month of operation and according to the minimum frequency stated below.

Fuel	Tune-up Frequency	NO _x (ppm @ 3% O ₂)	CO (ppm @ 3% O ₂)
Natural Gas	Every 61 months	80	100

[Regulatory Basis: ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

- d. **Tune-up Procedures:**
 - i. Tune-up must include measuring concentrations of NO_x, CO and O₂ under normal operating load, making any needed adjustments to combustion systems, and re-measuring emissions levels to confirm the prescribed emissions levels in Condition 14(c) are met.
 - ii. A record of all measurements, adjustments and maintenance actions must be retained.
 - iii. Emissions must be measured using an electrochemical cell combustion analyzer or another analyzer pre-approved by ORCAA;
 - iv. The analyzer(s) response to span (calibration) gas of a known concentration (reference) must be determined before and after testing. No more than 12 hours may elapse between span gas response checks. Test results are invalid if the analyzer zero or span drift exceeds 10% of the span value.
 - v. The CO and NO_x span gas concentrations must be no less than 50% and no more than 200% of the target emission concentrations per Condition 23(c). A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.

vi. Sampling and measurement must consist of at least 5 minutes of data collection.

Data must not be collected until after the analyzer readings have stabilized.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 8.8]

24. Lacquer Spray Machine Filters. The Line 1, Line 2, and Line 3 Lacquer Spray Machines overspray control system must be designed and operated according to the following requirements:

- a. Each lacquer spray machine must be equipped with a particulate filter with a rated filtration efficiency of at least 99%.
- b. Inside spray lacquer must be applied within the approved lacquer spray machines and only when the exhaust and filtration system is fully operating.
- c. Exhaust filters must be properly seated and must cover all openings of the exhaust air intakes.
- d. The permittee must develop, implement and update when necessary an Operations and Maintenance (O&M) plan for the lacquer spray machines. At a minimum, the plan must include procedures and a schedule for inspecting and replacing the filters.
- e. Filters must be replaced whenever damaged or loaded with particulate build-up to an extent that jeopardizes the effectiveness of the ventilation system to capture emissions.

[Regulatory Basis:

Line 1 and 2 - ORCAA Rule 6.1.10(b);

Line 3 – ORCAA Rule 6.1.4(a)(2)]]

25. Line 3 Solvent Usage Limit. The permittee must not use more than 2.6 gallons of isopropanol per hour on Line 3 Can Manufacturing Line.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

26. Line 3 Solvent Cleaning BACT. The Line 3 decorator capture system must be operating during cleaning of the decorators (the close capture hoods may be opened as needed for cleaning).

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

27. Line 3 Solvent Monitoring. Prior to startup of Line 3 Decorator, the permittee must develop an isopropanol monitoring plan to detail the methods the permittee will use to assure continuous compliance with the limit in Condition 25 and operating requirements in Condition 26. The plan must be made available for inspection by ORCAA upon request. The plan must be revised, if needed, and must be implemented at all times isopropanol is used on Can Manufacturing Line 3.

[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

28. Line 3 Solvent Recordkeeping. Records of all monitoring conducted per the monitoring plan in Condition 26 must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.

[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-070]

29. Pollution Prevention. All coatings, solvents, and other VOC-containing materials or cloths must be stored in closed, airtight containers. All volatile material spills must be cleaned up promptly.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

30. Curing Oven Capture Requirement: All emissions from the Lines 1, 2, and 3 Printer Ovens (PIN Ovens) and Lines 1, 2, and 3 Inside Bake Ovens (IBOs) must be routed to the regenerative thermal oxidizer at all times except during bypass as allowed by Condition 36.

[Regulatory Basis:

All ovens – ORCAA Rule 8.6(b);

Lines 1 and 2 Ovens – ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 2 and 3 PIN Ovens, Lines 1, 2, and 3 IBOs – ORCAA Rule 6.1.4(a)(2);

Line 1 PIN Oven – ORCAA Rule 6.1.10(b)(1)]

31. Coating Application Capture Requirement: The lacquer spray machines (all lines), the conveyors between the lacquer spray machines and the inside bake oven (all lines), and the Line 3 decorators must each be equipped with a system to capture volatile emissions. The capture systems must be operating at all times the coating lines are operating. Captured emissions must be routed to the regenerative thermal oxidizer at all times except during bypass as allowed by Condition 36.

[Regulatory Basis:

Lines 1 and 2 – ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 3 - ORCAA Rule 6.1.4(a)(2)]

32. Line 1 and 2 Capture Efficiency. The capture and collection systems for the Line 1 and Line 2 Can Coating Lines must operate with a minimum overall organic compound capture efficiency of 75% when the can coating lines are operating. For purposes of this condition, the can coating lines include all processes beginning with and including the printer/decorators and ending with and including the inside bake ovens.

[Regulatory Basis: ORCAA Rule 6.1.10(b)(1); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

33. Line 3 Capture Efficiency. The capture and collection systems for the Line 3 Can Coating Line must operate with a minimum overall organic compound capture efficiency of 84% when the can coating line is operating. For purposes of this condition, the can coating lines include all processes beginning with and including the printer/decorators and ending with and including the inside bake oven.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

34. Capture System Monitoring. The permittee must monitor each capture system that exhausts to the RTO according to the facility's capture system monitoring plan. Prior to startup of Can Manufacturing Line 3, the permittee must revise the existing capture system monitoring plan to include the capture systems in Line 3. The plan must be made available for inspection by ORCAA upon request. At a minimum, the permittee must review and update the capturing system monitoring plan after each capture system performance test or annually, whichever is more frequent. At a minimum the monitoring plan must:

- a. Identify the operating parameter(s) to be monitored to ensure that each capture system is operated under negative pressure and the capture efficiency determined during the last performance test is continuously maintained;
- b. Explain why the parameter(s) is appropriate for demonstrating ongoing compliance; and
- c. Identify the procedures that will be used to monitor the operating parameter(s) (including method and frequency).

[Regulatory Basis:

Line 1 and 2 - ORCAA Rule 6.1.10(b); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3);

Line 3 – ORCAA Rule 6.1.4(a)(2)]

35. Regenerative Thermal Oxidizer (RTO). The following limits and requirements apply to the regenerative thermal oxidizer:

- a. **Design.** The RTO must be a three-chamber design with a design exhaust rate of at least 55,000 ACFM, which may be demonstrated through written documentation on the regenerative thermal oxidizer provided by the manufacturer.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. **Approved Fuel.** The RTO may combust only natural gas unless prior approval is granted by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- c. **Destruction Efficiency.** The RTO must have a minimum destruction efficiency of 98% for organic compounds as measured by EPA Method 25A.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

- d. **Formaldehyde Emission Limit.**

- i. Emissions of formaldehyde from the RTO stack must not exceed 0.53 pounds per hour at all times.
- ii. Emissions of formaldehyde from the RTO stack must not exceed 0.26 pounds per hour when controlling emissions from Can Coating Lines 1 and 2 only.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 8.6(b)]

- e. **Opacity Limit.** There must be no visible emissions from the Regenerative Thermal Oxidizer as determined in accordance with EPA 40 CFR Part 60 Appendix A, Method 9. This limit does not apply during periods of cold start-up. For compliance with this condition, cold start-up is defined as the period beginning when the RTO is started and ending when the RTO reaches normal operating temperature. This opacity limit is in addition to the state-wide general opacity standard of 20% required under WAC 173-400-040(1) and ORCAA Rule 8.2.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- f. **Tune-ups.** Combustion systems must be tuned-up to meet the NO_x and CO emissions levels stated below or the manufacturer’s recommended or guaranteed operating emissions levels, whichever levels result in the least emissions of NO_x and CO. The RTO must be tuned in the first month of operation and according to the minimum frequency stated below. Tune-ups shall be conducted according to the procedures in Condition 23(d).

Fuel	Tune-up Frequency	NO _x (ppm @ 3% O ₂)	CO (ppm @ 3% O ₂)
Natural Gas	Every 61 months	60	50

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

36. RTO Bypass: The following limits and requirements apply:

- a. The regenerative thermal oxidizer may be bypassed for maintenance purposes only.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

- b. The regenerative thermal oxidizer must not be bypassed for more than 200 hours on a 12-month rolling period.

[Regulatory Basis: ORCAA Rule 6.1.2(l)]

- c. When bypassing the RTO, only one of the following may be operational:

- i. Coating Line 1; or
- ii. Coating Line 2; or
- iii. Coating Line 3 at a rate not to exceed 2000 cans-per-minute with no more than one decorator and one PIN oven operating.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(3); ORCAA Rule 8.6(b); ORCAA Rule 6.1.4(a)(5); WAC 173-460-080(3)]

- d. Total emissions of formaldehyde from Line 1 or 2 bypass stacks must not exceed 1.3 pounds per hour.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- e. Total emissions of formaldehyde from Line 3 bypass stacks must not exceed 1.07 pounds per hour.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- f. Coating Line 3 must not operate in bypass mode until a performance test has been conducted to verify compliance with Condition 36(e). If necessary, Coating Line 3 may operate in bypass mode for the purposes of the performance test.

[Regulatory Basis: ORCAA Rule 8.6(b)]

- g. Visible emissions from the bypass stacks must not exceed ten percent opacity, six-minute average, as determined in accordance with EPA 40 CFR Part 60 Appendix A, Method 9. This limit does not apply during periods of cold start-up. For compliance with this condition, cold start-up is defined as the period beginning when the oven is started and ending when the oven reaches normal operating temperature. This opacity limit is in addition to the state-wide general opacity standard of 20% required under WAC 173-400-040(1) and ORCAA Rule 8.2.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- h. The permittee must monitor bypasses of the RTO. Bypass monitoring must be conducted on each bypass line using one of the following procedures:

- i. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the emission unit was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.
- ii. Install, maintain, and operate a bypass line valve or damper indicator to continuously monitor valve or damper position. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve or damper position.
- iii. Secure the bypass line valve in the nondiverting position with a car-seal or a lock-and-key type configuration and visually inspect the seal or closure mechanism at

least once a month. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

37. RTO Temperature Monitoring. The permittee must monitor the combustion chamber temperature of the RTO as follows:

- a. Each RTO combustion chamber must be equipped with a sensor that continuously measures and records the temperature of each combustion chamber (or in the duct immediately downstream of the combustion chamber before any substantial heat exchange occurs). The combustion chamber temperature sensor must be accurate to within $\pm 1\%$ of the temperature being monitored in degrees Fahrenheit or ± 1.8 degrees Fahrenheit, whichever is greater.
- b. Temperature sensors must be installed, maintained, and operated according to manufacturer specifications.
- c. The permittee must develop, implement, and update when necessary a quality control plan to verify that the temperature sensor is still functioning properly. At a minimum, the plan must include the verification method and frequency. Methods may include, but are not limited to, comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices. The temperature sensor must be replaced with a new sensor either if the sensor looks damaged and/or broken or the sensor no longer meets the accuracy requirement specified in Condition 37(a).
- d. The permittee must conduct temperature monitoring at all times the RTO is operating, except during bypass, monitoring malfunctions, associated repairs, and required quality assurance or control activities,
- e. The temperature must be recorded at least once for each successive 15-minute period and the average determined of all recorded readings for each successive 3-hour period.
- f. Prior to the initial performance test, the combustion chamber temperature setpoint must be established at a minimum of 1550 degrees Fahrenheit. The combustion chamber temperature (three-hour average) must not fall below 1500 degrees Fahrenheit.
- g. After the initial performance test, the average combustion chamber temperature measured at the most recent performance test must be established as the minimum combustion chamber temperature setpoint. The combustion chamber temperature (three-hour average) must not fall more than 50 degrees Fahrenheit below the average combustion chamber temperature measured at the most recent performance test.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 6.1.4(a)(5); WAC 173-460-060]

38. Operations and Maintenance Plan: The Permittee must develop, implement, and update when necessary an operation and maintenance (O&M) plan to assure the capture and control systems are in continuous compliance with all applicable air regulations and standards. The O&M plan must be retained on site and made available to ORCAA for review when requested. Operating instructions must be established and posted such that they are available for all RTO operators.

[Regulatory Basis: ORCAA Rule 8.8]

39. Capture and Control Systems Recordkeeping: The following records must be maintained for at least five years from the date the record originated, or as specified, and made available for inspection upon request:

- a. Documentation of RTO design specification per Condition 35(a).
- b. Records of RTO tune-ups required by Condition 35(f).
- c. Records of all RTO bypass monitoring including start time and end time, reason for the bypass, emission units venting to the atmosphere during bypass, and amount of each coating material applied during the bypass.
- d. Capture system monitoring plan and all associated capture system monitoring.
- e. Records of LSM filter efficiency per Condition 24(a).
- f. LSM O&M plan required by Condition 24(d). The permittee must keep an inspection and maintenance log for the LSM filter system including the date of each inspection, the name of the inspector, and any repairs and/or maintenance work performed.
- g. RTO combustion chamber temperature monitoring records including all temperature readings and 3-hour averages.
- h. RTO temperature sensor quality control plan and all associated monitoring and maintenance activities.
- i. RTO and capture system O&M plan required by Condition 38. The permittee must keep an inspection and maintenance log for the RTO and its capture systems including the date of each inspection, the name of the inspector, and any repairs and/or maintenance work performed.
- j. Records of maintenance conducted on the equipment listed in Condition 1.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

40. Ongoing Performance Testing Required.

- a. A performance test of RTO destruction efficiency must be performed at least once every 61 months or whenever required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2); ORCAA Rule 1.5(i)]

- b. A performance test for compliance with formaldehyde emission limits in Condition 35(d) and Condition 36(d) must be conducted when required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 8.6(b); ORCAA Rule 1.5(i)]

- c. A subsequent performance test for capture efficiency testing is required within 61 months of the initial test or earlier if requested by ORCAA. After that, additional testing may be required if significant changes have been made to the capture system or when required by ORCAA.

[Regulatory Basis: ORCAA Rule 6.1.10(b); ORCAA Rule 1.5(i)]

41. Line 3 Bypass Performance Test. As required by Condition 36(f), the permittee must conduct a performance test prior to operating Coating Line 3 when the RTO is in bypass mode. The performance test shall be conducted to verify the short-term (maximum hourly) formaldehyde emission rate during bypass of Line 3 is less than or equal to the limit in Condition 36(e) and establish an emission factor for formaldehyde during bypass. Following the initial performance test, the permittee must conduct a performance test for compliance with Condition 36(e) when required by ORCAA.

[Regulatory Basis: ORCAA Rule 8.6(b); ORCAA Rule 6.1.2(l); ORCAA Rule 1.5(i)]

42. Performance Testing Requirements. All performance testing must be conducted as follows unless an alternative has been approved by ORCAA:

- a. Testing must be conducted when all can coating lines are operating at maximum production rate and applying the ink, overvarnish, and inside spray combination that will result in the maximum emissions.
- b. Capture system performance testing must be conducted by determining the weight and VOC content of each material applied according to EPA Method 204A and inlet mass of VOC to the RTO by Method 25A or alternative methods if approved by ORCAA. As an alternative to conducting separate performance tests to demonstrate compliance with Conditions 32 and 33, the permittee may conduct a compliance test to demonstrate that the overall organic compound capture efficiency of the capture and collection systems of Lines 1, 2, and 3 is at least 80%.
- c. Performance testing for RTO destruction efficiency must be conducted according to EPA Method 25A or alternative method if approved by ORCAA.
- d. Performance testing for formaldehyde must be conducting according to EPA Method 320 or alternative method approved by ORCAA.
- e. Performance testing to determine the volumetric flowrate must be conducted according to EPA Methods 1-3 or alternative method if approved by ORCAA.
- f. A performance test must consist of three runs. Each run must be a minimum of one hour (or longer if the test method requires).
- g. During the performance test, the permittee must monitor and record the RTO combustion chamber temperature(s) at least once every 15 minutes during each of the three test runs. The temperature must be monitored in the combustion chamber or immediately downstream before any substantial heat exchange occurs.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

43. Performance Testing Notifications, Plans and Reports. Whenever performance testing is required:

- a. The permittee must submit a notification of the intent to conduct a performance test and a site-specific test plan to ORCAA at least 60 calendar days before the scheduled date of a performance test.
- b. At a minimum, the test plan must include the following:
 - i. Test program summary;
 - ii. Test schedule;
 - iii. Data quality objectives;
 - iv. Internal and external quality assurance program;
 - v. Identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the RTO determined during the performance test are maintained at all times; and
 - vi. Identify the operating parameters and ink, overvarnish, and inside spray that will be used to meet the objective in Condition 44(a).
- c. The permittee must submit a performance test report to ORCAA no later than 60 days after completion of the test. The performance test must be certified as true and

accurate by responsible officials from the testing contractor and the permittee. At a minimum, the performance test report must contain the following information:

- i. A description of the source and sampling location;
- ii. The date and time of each test;
- iii. A summary of test results reported in units and averaging period appropriate to the applicable standard;
- iv. A description of the test methods and quality assurance procedures used;
- v. The types and amounts of coating materials;
- vi. Operating parameters of the emission units and control equipment during each test;
- vii. Raw field data and sample calculations; and
- viii. Deviations from approved test plans or the O&M Plan.

[Regulatory Basis: ORCAA Rule 8.11; ORCAA Rule 1.5(d)&(i)]

44. Exhaust Stack and Vent Requirements. Exhaust stacks and vents must meet the following requirements:

- a. There must be no flow obstructions at the point of discharge from the exhaust stacks or vents (i.e. cap) for the Line 2 Pin Oven, Line 1 and 2 Inside Bake Oven, Regenerative Thermal Oxidizer, or any Line 3 stack/vent. However, a weatherproof stack exhaust configuration that does not obstruct the air flow as it exits the stack is acceptable.

[Regulatory Basis: ORCAA Rule 6.1.4(a)(2)]

- b. Each stack or vent listed below must have a height above ground that is equal to or greater than the following:

Stack or Vent	Height equal to or greater than...
Line 1 Pin Oven Bypass Stack	14.3 meters
Line 2 Pin Oven Bypass Stack	14.3 meters
Line 1 Inside Bake Oven Bypass Stacks	14.0 meters
Line 2 Inside Bake Oven Bypass Stacks	14.0 meters
Regenerative Thermal Oxidizer Stack	18.3 meters
Line 3 Can Washer Stack	17.4 meters
Line 3 Rooftop Vents	13.7 meters
Line 3 Pin Oven Bypass Stacks	14.3 meters
Line 3 Inside Bake Oven Bypass Stacks	14.0 meters

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

- c. No later than 90 days from the startup of Can Manufacturing Line 3, the permittee shall measure the velocity or volumetric flowrate of the following exhaust stacks or vents listed below to verify rate is as listed in Condition 1 or higher. ORCAA must be notified of the test date, planned test method, and operational parameters that will be monitored (i.e. fan speed, damper settings) at least seven days prior to the testing. After the initial test, subsequent verification of volumetric flowrates from stacks or vents may be required if significant changes have been made to the exhaust system or when required by ORCAA.
 - i. Line 3 Can Washer stack
 - ii. Line 3 Decorator room vents
 - iii. Line 3 Printer Oven Bypass Stacks

iv. Line 3 Inside Bake Oven Bypass Stacks

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 1.5(i); ORCAA Rule 6.1.4(a)(3); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

45. Exhaust Stack and Vent Monitoring Plan. No later than 30 days after measuring velocity or volumetric flowrate as required by Condition 44(c), the permittee must develop and implement an exhaust stack and vent monitoring plan. The plan must be made available for inspection by ORCAA upon request. At a minimum, the monitoring plan must:

- a. Identify the operating parameter(s) to be monitored to assure that the flowrate from the exhaust stacks or vents are continuously maintained as listed in Condition 1;
- b. Explain why the parameter(s) is appropriate for demonstrating ongoing compliance;
- c. Identify the procedures that will be used to monitor the operating parameter(s) (including method and frequency); and
- d. If ongoing monitoring is not necessary for a specific stack, documentation of that determination (i.e. fixed speed fan).

[Regulatory Basis: ORCAA Rule 6.1.2(l); ORCAA Rule 6.1.4(a)(5); WAC 173-460-070]

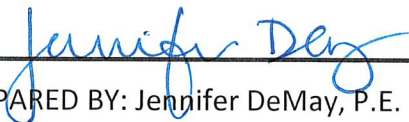
46. Exhaust Stack and Vent Recordkeeping. Records of all exhaust stack and vent testing and monitoring must be maintained for at least five years from the date the record originated and be made available for inspection by ORCAA upon request.


[Regulatory Basis: ORCAA Rule 8.8; ORCAA Rule 6.1.4(a)(5); 173-460-070]

18. Final Determination to Approve

This Final Determination documents ORCAA staff's determinations with respect to the applicable criteria of approval in ORCAA Rule 6.1 and the Washington State Implementation Plan under 40 CFR part 52.2470(c), Table 6. ORCAA staff recommends approval of Crown's proposed to use PFAS Matte Over Varnish PPG 9201-811F, provided the conditions identified in Section 17 of this Final Determination are implemented through an enforceable Order of Approval (AKA: Air Permit). Emissions calculations, modeling summary and other data supporting this Final Determination are provided as attachments.

~ end of section ~


PREPARED BY: Jennifer DeMay, P.E.


Date

Attachments

Applicable Performance Standards that apply to Crown Cork & Seal

Title Citation	Brief Description (Consult rule/regulation for specific requirements)	Applies to
New Source Review (NSR) ORCAA Rule 6 Chapter 173-460 WAC	Approval by ORCAA through a NOC application is required prior to establishing or constructing any new source of emissions or modifying an existing source. This includes removal of a control device or substantial modification of an existing control device.	Applies generally to all air pollution sources
Demolition and Asbestos Requirements ORCAA Rule 6.3	Requires notification prior to certain demolition or asbestos projects as well as requirements for asbestos projects and disposal.	Applies generally to all air pollution sources
Interference or Obstruction ORCAA Rule 7.1	Prohibits willfully interfering with or obstructing the Executive Director or any Agency employee in performing any lawful duty.	Applies generally to all air pollution sources
False or Misleading Statements ORCAA Rule 7.2	Prohibits any person from willfully making a false or misleading statement to the Board or its representative as to any matter within the jurisdiction of the Board.	Applies generally to all air pollution sources
Unlawful Reproduction or Alteration of Documents ORCAA Rule 7.3	Prohibits reproducing or altering, or causing to be reproduced or altered, any order, registration certificate or other paper issued by the Agency if the purpose of such reproduction or alteration is to evade or violate any provision of these Regulations or any other law.	Applies generally to all air pollution sources
Display of Orders and Certificates ORCAA Rule 7.4	Any order or registration certificate required to be obtained by these Regulations shall be available on the premises designated on the order or certificate. In the event that the Agency requires order or registration certificate to be displayed, it shall be posted. No person shall mutilate, obstruct, or remove any order or registration certificate unless authorized to do so by the Board or the Executive Director.	The Approval Order issued in conjunction with this NOC approval must be retained on site.
Concealment and Masking WAC 173-400-040(8) ORCAA Rule 7.5	Prohibits installation or use of any device or means to conceal or mask emissions of an air contaminant, which causes detriment to health, safety, or welfare of any person, or causes damage to property or business.	Applies generally to all air pollution sources
Emissions Detrimental to Persons or Property WAC 173-400-040(6) ORCAA Rule 7.6	Prohibits causing or allowing the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.	Applies generally to all air pollution sources
Visible Emissions WAC 173-400-040(2) ORCAA Rule 8.2(a)	Prohibits emissions with opacity of greater than 20% for more than three (3) minutes in any one hour.	Applies generally to all air pollution sources
General Requirements WAC 173-400-040(1)(c) ORCAA Rule 8.3	All emissions units are required to use reasonably available control technology (RACT).	Applies generally to all air pollution sources.

Attachments

Fugitive Emissions WAC 173-400-040(4)(a) ORCAA Rule 8.3(c)	<p>The owner or operator of any emissions unit engaging in materials handling, construction, demolition, or other operation which is a source of fugitive emission shall take reasonable precautions to prevent the release of air contaminants from the operation.</p>	<p>Applies generally to any activity that results in fugitive emissions.</p>
Fallout WAC 173-400-040(3) ORCAA Rule 8.3(e)	<p>Prohibits particulate emissions from any source to be deposited, beyond the property under direct control of the owner or operator of the source, in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material was deposited.</p>	<p>Applies generally to all air pollution sources.</p>
Odor WAC 173-400-040(5) ORCAA Rule 8.5	<p>ORCAA Rule 8.5 contains general requirements for controlling odors and a general prohibition of odors that unreasonably interfere with the use or enjoyment of a person's property.</p>	<p>Applies generally to all air pollution sources.</p>
Excess Emissions Provisions WAC 173-400-107; WAC 173-400-108 ORCAA 8.7	<p>Requires excess emissions be reported to the Agency as soon as possible and within 24 hours and establishes criteria qualifying excess emissions as unavoidable.</p>	<p>Applies generally to all air pollution sources</p>
Equipment Maintenance and Repair ORCAA Rule 8.8	<p>ORCAA Rule 8.8 requires that all air contaminant sources keep any process and/or air pollution control equipment in good operating condition and repair.</p>	<p>Applies generally to all air pollution control devices.</p>
Record Keeping and Reporting. ORCAA Rule 8.11	<p>Requires the following:</p> <ol style="list-style-type: none"> 1. Maintenance of records on the nature and amounts of emissions and other related information as deemed necessary by ORCAA; 2. Reporting of emissions to ORCAA upon request. 	<p>Required of all facilities registered with ORCAA.</p>
Sulfur Dioxide WAC 173-400-040(7)	<p>No person shall cause or allow the emission from any emissions unit in excess of one thousand ppm of sulfur dioxide on a dry basis, corrected to seven percent oxygen for combustion sources, and based on the average of any period of sixty consecutive minutes.</p>	<p>Applies generally to facilities that emit Sulfur Dioxide.</p>
Fugitive Dust WAC 173-400-040(9)	<p>The owner or operator of a source or activity that generates fugitive dust must take reasonable precautions to prevent that fugitive dust from becoming airborne and must maintain and operate the source to minimize emissions.</p>	<p>Applies to any activity that results in fugitive dust.</p>
State Greenhouse Gas Reporting Chapter 173-441 WAC	<p>Requires annual reporting of Greenhouse Gas emissions to Ecology.</p>	<p>Applies to generally to all stationary process units that exhaust to the atmosphere.</p>
Particulate Standards for Process units ORCAA Rule 8.3(a) WAC 173-400-060	<p>Prohibits emissions from any process unit in excess of 0.1 grain/dscf. EPA test methods from 40 CFR Appendix A shall be used should demonstration of compliance be required.</p>	<p>Applies generally to all process units that emit particulate matter that exhaust to the atmosphere.</p>
Particulate Standards for Combustion Units ORCAA Rule 8.3(a) WAC 173-400-050(1)	<p>Prohibits emissions from any combustion unit in excess of 0.1 grain/dscf. EPA test methods from 40 CFR Part 60 Appendix A shall be used should demonstration of compliance be required.</p>	

Attachments

40 CFR Part 60, Subpart WW	New Source Performance Standards - Standards of Performance of the Beverage Can Surface Coating Industry. Applies to beverage can surface coating lines with the following affected facilities: new, modified, or reconstructed exterior base coat operation, overvarnish coating operation, and inside spray coating operation.	Applies to the overvarnish and inside spray coating operations.
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OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

Form 1 Instructions:

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records (www.orcaa.org).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name: Crown Cork & Seal	For ORCAA use only File No: <i>152</i> County No: <i>67</i> Source No: <i>B</i> Application No: <i>23NOC1621</i>
Mailing Address: 1202 Fones Rd SE Olympia, WA 98501	Date Received: <div style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;"> Received OCT 20 2023 ORCAA </div>
Physical Address of Project or New Source: 1202 Fones Rd SE Olympia, WA 98501	
Billing Address: 1202 Fones Rd SE Olympia, WA 98501	
Project or Equipment to be installed/established: Existing Matte varnish, 9201811, has been reformulated as 9201811F. See attached Description	
Anticipated startup date: <u>11</u> / <u>30</u> / <u>2023</u> Is facility currently registered with ORCAA? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
This project must meet the requirements of the State Environmental Policy Act (SEPA) before ORCAA can issue final approval. Indicate the SEPA compliance option: <input type="checkbox"/> SEPA was satisfied by _____ (government agency) on ___/___/___ (date) - Include a copy of the SEPA determination <input type="checkbox"/> SEPA threshold determination by _____ (government agency) is pending - Include a copy of the environmental checklist <input checked="" type="checkbox"/> ORCAA is the only government agency requiring a permit - Include ORCAA Environmental Checklist <input type="checkbox"/> This project is exempt from SEPA per _____ (WAC citation).	
Name of Owner of Business: Teresa Compton	Agency Use Only CONDITIONALLY APPROVED FOR CONSTRUCTION ONLY IN ACCORDANCE WITH RCW 70A.15 WAC 173-400 ORCAA REGULATIONS (SEE ATTACHED ADDENDUM FOR CONDITIONS OF APPROVAL) <div style="text-align: center; color: blue; font-size: 1.2em; font-weight: bold;"> 2/27/2024 </div> <hr/> DATE <div style="text-align: center; color: blue; font-size: 1.5em;"> </div> <hr/> ORCAA
Title: Plant Manager	
Email: <i>teresa.compton@crowncork.com</i> Phone: <i>360-438-6561</i>	
Authorized Representative for Application (if different than owner): Wesley McNallie	
Title: Plant Engineer	
Email: <i>wesley.mcnallie@crowncork.com</i> Phone: <i>360-438-6565</i>	
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.	
Signature of Owner or Authorized Representative: (sign in Blue Ink) <div style="text-align: center; color: blue; font-size: 1.5em;"> </div>	
Date: <i>10/20/23</i>	
IMPORTANT: Do not send via email or other electronic means. ORCAA must receive Original, hardcopy, signed application and payment prior to processing application.	