



## Technical Support Document for Crown Cork & Seal (USA), Inc.

Olympic Region Clean Air Agency  
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PERMIT NO:	15AOP1129
ISSUANCE DATE:	September 1, 2016
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PERMITTEE & MAILING ADDRESS:	Crown Cork & Seal Company, Inc. 1202 Fones Road Olympia, WA 98501
FACILITY LOCATION:	1202 Fones Road Olympia, WA 98501
FACILITY DESCRIPTION:	Manufacturer of aluminum beverage cans
ORCAA FILE #:	152
PRIMARY SIC:	3411
NAICS:	332431
ICISAir:	WAORC0005306700008

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## 1.0 DISCLAIMER

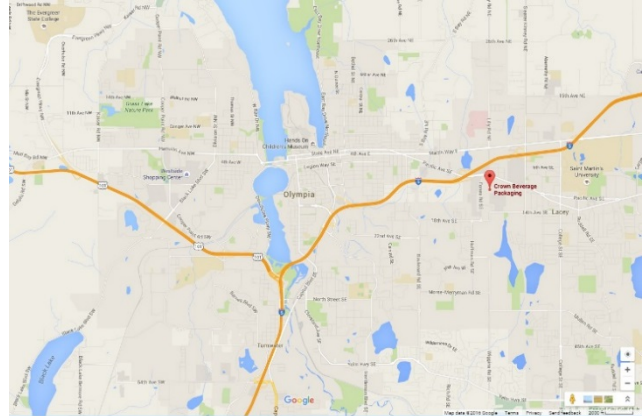
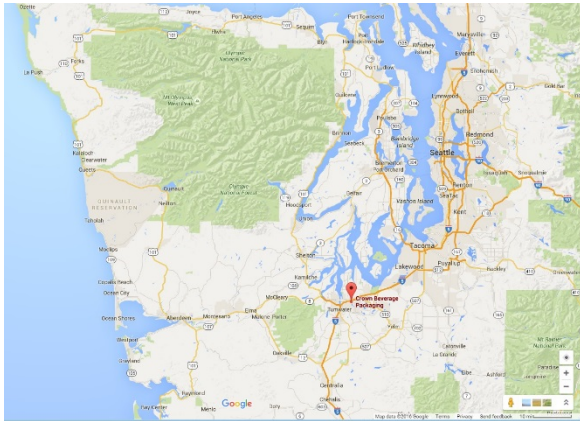
This Technical Support Document (TSD) describes the history, equipment, and operations at the Crown Cork & Seal Company (USA), Inc. (Crown) facility relevant to determining applicable air quality regulations and requirements. The information contained in this document is for purposes of background information only and is not directly enforceable. Air-related requirements pursuant to both the Federal Clean Air Act (FCAA) and Washington's Clean Air Act (WACAA) are contained in Crown's Air Operating Permit (AOP) and include emission limits and associated monitoring, record keeping, and reporting requirements. All terms and conditions in Crown's AOP are enforceable.

## 2.0 FACILITY DESCRIPTION

### 2.1 Facility Overview

Crown Cork & Seal Company (USA), Inc. owns and operates an aluminum beverage can manufacturing facility located at 1202 Fones Rd in Olympia, Washington. Adjacent lands include residential, commercial, and industrial properties.

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



Crown began operation in Olympia as an aluminum can manufacturing plant in August 1959 and registered with ORCAA as an air contaminant source in 1972. The facility expanded in 1987 to include additional can coating operations as well as the production of can ends, but the can end lines were removed in 1998. In 2014, Crown produced over 1,569,000,000 cans and emitted over 174 tons of volatile organic compounds (VOCs).

Volatile organic compounds (VOCs) are emitted as a result of the storage, handling, mixing, application, and cleanup of VOC-containing coatings and solvents. In addition to ORCAA and state rules, Crown is also subject to EPA's New Source Performance Standards (NSPS) for can coating operations.

## 2.1 Can Manufacturing Process

The finished aluminum beverage can is made of two pieces, the can body and the can end. Crown's Olympia facility manufactures aluminum can bodies; the can ends are made elsewhere and assembled with the can body at the bottling facilities.

Can bodies are first formed in a "Draw and Iron" (D&I) process that starts with aluminum coil (roll of sheet aluminum). The coil is loaded by forklift onto the coil unwinder which unrolls the aluminum sheets and feeds the coil through a lubricator. The lubricator uses a series of rollers to coat the aluminum sheet with mineral oil. The aluminum coil is fed onto the cupper, which punches out body blanks and forms the cups. Formed aluminum cups are conveyed to one of the wall ironing machines (a.k.a. bodymakers). The cups are sprayed with a lubricating/cooling oil and the machine draws and irons the aluminum cups into cans with uneven edges. The jagged edges of the formed cans are cut to the required length at the trimmer and waste metal is transported pneumatically to the compaction baler.

The can bodies are then washed and etched in solutions of hydrofluoric and sulfuric acids. Washing and etching processes result in minor emissions of hydrofluoric and sulfuric acids and products of natural gas combustion. After washing, the bottom of the can body is coated with a varnish which reduces friction and improves the can mobility through the rest of the process. Inks are then applied to the outside surface of the can followed by an over-varnish which protects the printed surface. The cans are then cured in ovens called PIN ovens. Air emissions that result from outside printing and varnishing of the cans include volatile organic compounds (VOCs), hazardous air pollutants (HAPs), toxic air pollutants (TAPs), and products of combustion from combustion of natural gas in the PIN ovens.

After curing in the PIN ovens, the inside of the can bodies are coated with an inside lacquer. The purpose of the inside lacquer is to provide a barrier preventing corrosion of the metal can by the soda or beer that will be contained in the can. The inside lacquer is spray applied in units referred to as lacquer spray machines (LSM). The cans are then cured in ovens referred to as interior bake ovens (IBOs). Emissions from applying lacquer to the inside of the cans include VOC, HAPs, TAPs, and products of combustion from combustion of natural gas in the IBOs.

After coating, the cans proceed to a necker-necker which decreases the neck diameter of a can by forcing it into two successive dies. The resulting can has a smaller opening than the cylinder and a curved shoulder. The cans are then scanned for defects and sent to a palletizer and packaging.

### **3.0 EMISSION UNIT SUMMARY**

#### **3.1 Can Washers (EU1 – EU3)**

The primary can washer (a.k.a. the Line B can washer) is designated as Emission Unit #1 (EU1). The can washer is a Cincinnati Industrial Machinery (CIM) Model #BS1122422-88 C40-2 and was approved under NOC# 08NOC622. It can process up to 5000 cans per minute. The washer has one stack for the etching zone.

The Line B can washer dryer is designated as Emission Unit #2 (EU2). The Eclipse 440 AH dryer consists of two drying zones, each with a 4.4 MMBtu/hr natural gas-fired burner. Each drying zone has its own stack. The dryer was approved under NOC# 08NOC622.

The backup can washer (a.k.a. the Line A washer) is designated as Emission Unit #3 (EU3). The can washer is a Cincinnati Industrial Machinery (CIM) Model #BS112528 C87 and was approved under NOC# 95NOC641 and installed in August 1995. It can process up to 4000 cans per minute. This unit has an integrated 7.2 MMBtu/hr natural gas-fired dryer with a burner in each of two drying zones. The backup washer has one stack for the etching zone and one stack for each drying zone. The Line A washer is a backup unit used on maintenance days.

Can washing and etching takes place in one of two continuous can washers. Can washing is necessary to remove residual oils and lubricants from the can surface which were applied during the can forming process. Can etching is necessary to provide an adequate surface to allow the coating to bond to the can.

The cans are initially rinsed with cold water in a closed system which removes the majority of the residual lubricants. Following the cold rinse, the cans are washed in a hot water wash. Hot water is provided through a heat exchanger that is part of the natural gas-fired boiler system (IEU5 and IEU6). Wastewater from this portion of the can washing process is sent to waste water collection tanks where oil is skimmed off the top and then sent to a waste collection tank.

Next, the cans are etched using dilute solutions of sulfuric and hydrofluoric acids. Acid solutions are heated to a temperature of 130 to 135°F by a heat transfer unit that is part of the natural gas-fired boiler system. After etching, the cans are rinsed several times with cold water rinse cycles before a final rinse with de-ionized water. The clean cans are then dried in a natural gas-fired dryer.

Emissions from can washing and etching consist of hydrogen fluoride, sulfuric acid, and products of natural gas combustion from the natural gas-fired burners in the dryers. Emissions are discharged primarily through the dryer stacks.

### **3.2 Rim Coater (EU4)**

After drying, the cans proceed to the rim coater which is designated as Emission Unit #4 (EU4). The rim coater is a U.V. Fusion U.V. System Model DRR-120 that was installed in 1996. A NOC was not required due to the low VOC content of the coating. The rim coating unit applies a rim varnish using roller applicators to the base of the can to provide a smooth surface to enable better transport of the can through the coating line. The rim coat is cured using ultra-violet radiation. VOC emissions from the rim coater are emitted through general building exhaust vents.

### **3.3 Coating Lines – Exterior Coating (Decorators, PIN oven) (EU7, EU8, EU11, EU12)**

Following rim coating the cans are sent to one of two can coating lines. Each can coating line is comprised of a decorator unit (a.k.a. Printer/Over-varnish unit), a printer (PIN) oven, lacquer spray machines (LSM), and internal bake oven (IBO).

For Line 1 the decorator unit and PIN oven are designated as Emission Unit #7 (EU7) and Emission Unit #8 (EU8), respectively. The Line 1 decorator unit is a Concord Decorator-Alcoa Serial# D3008 and the PIN oven is an OSI Model# 1600-CPM SINGLE ZONE. The Line 1 decorator and PIN oven was installed in March 1998 as a swing line (NOC# 97NOC040) and was changed to a primary line in January 2000 (NOC# 98NOC021).

For Line 2 the decorator unit and PIN oven are designated as Emission Unit #11 (EU11) and Emission Unit #12 (EU12), respectively. The Line 2 the decorator unit is a Concord Decorator-Alcoa Serial# 307301 and the PIN oven is an OSI Model # R.H. Sigma / Serial# 6882. The Line 2 decorator and PIN oven was installed in January 2000 (NOC# 98NOC021).

In the decorator unit, the exterior of the cans are coated using a two-step process. Ink is applied by rotating the cans against a rotating rubber printing blanket and then varnish is applied with a varnish roller. After printing and varnishing, the cans are blown by air onto pins and transported into the printer (PIN) oven for curing. The can spends approximately six seconds inside the natural gas-fired PIN oven. Typical oven temperature is 365-390 degrees Fahrenheit. The cans are heated indirectly in both PIN ovens. In Line 1, the combustion gases are emitted out of a separate stack. Emissions from the use and curing of ink and varnish are exhausted from two separate stacks, one of which has a cooling section. In Line 2, emissions from the use and curing of ink and varnish and combustion of natural gas are exhausted from one stack.

### **3.4 Coating Lines – Interior Coating (LSM, IBO) (EU9, EU10, EU13, EU14)**

The Line 1 lacquer spray machines (LSMs) and internal bake oven (IBO) are designated as Emission Unit #9 (EU9) and Emission Unit #10 (EU10), respectively. The Line 2 LSMs and IBO are designated as Emission Unit #13 (EU13) and Emission Unit #14 (EU14), respectively.



The LSMs in both lines are Fisher Model 102MSH MARK3 machines installed in January 2000 (NOC# 00NOC034). Each coating line has seven lacquer spray machines that are vented collectively to a stack. Each machine contains a spray unit that applies lacquer to the inside of cans. Each spray unit has a 10 micron spray screen filter to capture overspray.

After lacquer is applied, the cans are cured in a natural gas-fired internal bake oven (IBO). The Line 1 IBO is a FECO Serial# 15241 that was installed in May 1982 and the Line 2 IBO is a Ross Serial# LWD429-165 that was installed in December 1972. Each IBO has two burners, one in each curing zone. Typical oven temperatures are 375 degrees Fahrenheit in Zone 1 and 400-405 degrees Fahrenheit in Zone 2. The cans are heated indirectly, however, combustion gases are combined with emissions from the use and curing of lacquer and are exhausted from the IBO stacks (one for each unit).

### **3.5 Solvent Cleaning (EU5)**

Solvent usage is designated as Emission Unit #5 (EU5). Solvent use was previously misclassified as an insignificant emission unit based on emissions. As actual fugitive emissions from isopropanol (a VOC) in 2014 was 30.5 tons it does not qualify as an insignificant emission unit. Solvents are used as cleanup materials. Isopropanol is used to hand-clean the decorator units and is used in two parts washers in the decorator area. Petroleum naphtha is used in the machine shop and millwright shop. Pollution prevention measures such as storing solvents and solvent-containing materials in covered containers and cleaning up spill are used to minimize emissions.

### **3.6 Emergency Engine (EU6)**

The Emergency Engine is designated as Emission Unit #6 (EU6). The emergency engine is a 149 horsepower Clarke Model JUHJ-UFG8 diesel fire pump engine. This unit does not qualify as an insignificant emission unit as it is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ.

**TABLE 3.1 EMISSION UNIT SUMMARY**

Emission Unit #	Description	Control Equipment/Techniques	Associated Stack(s)
EU1	<b>Line B Can Washer (primary)</b> <ul style="list-style-type: none"> <li>▪ Cincinnati Industrial Machinery (CIM) Model #BS1122422-88 C40-2</li> <li>▪ 5000 cans per minute*</li> </ul>	Can washing solution limitations	Washer 1A
EU2	<b>Line B Can Washer Natural Gas-Fired Dryer</b> <ul style="list-style-type: none"> <li>▪ Eclipse 440 AH dryer</li> <li>▪ 2 Natural gas-fired burners</li> <li>▪ 8.8 MMBtu/hr maximum heat input</li> </ul>	None	Washer/Oven 1A Washer/Oven 1B
EU3	<b>Line A Washer (backup)</b> <ul style="list-style-type: none"> <li>▪ Cincinnati Industrial Machinery (CIM) Model BS112528 C87</li> <li>▪ 4000 cans per minute*</li> <li>▪ Integrated 7.2 MMBtu/hr natural gas-fired dryer</li> </ul>	Can washing solution limitations	Washer 2 Washer/Oven 2A Washer/Oven 2B
EU4	<b>Rim Coater with UV Cure</b> <ul style="list-style-type: none"> <li>▪ U.V. Fusion U.V. System Model DRR-120</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings and low-VOC coatings.</li> <li>▪ Use of UV curing.</li> </ul>	None
EU5	<b>Solvent Cleaning</b> <ul style="list-style-type: none"> <li>▪ Parts Washers (isopropanol)</li> <li>▪ Hand cleaning of decorator units (isopropanol)</li> <li>▪ Machine/Millwright shops (naphtha)</li> </ul>	Pollution prevention	None
EU6	<b>Diesel Emergency Fire Pump Engine</b> <ul style="list-style-type: none"> <li>▪ Clarke Model JUGH-UFG8</li> <li>▪ 149 hp, 9.5 gal/hr</li> </ul>	None	Fire Pump Stack
<b>CAN COATING LINE 1</b>			
EU7	<b>Line 1 Decorator Unit</b> <ul style="list-style-type: none"> <li>▪ Concord Decorator-Alcoa Serial # D3008</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of low-VOC inks.</li> <li>▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish.</li> <li>▪ Roll on application.</li> </ul>	None

Emission Unit #	Description	Control Equipment/Techniques	Associated Stack(s)
EU8	<b>Line 1 Printer Oven (PIN)</b> <ul style="list-style-type: none"> <li>▪ OSI Model# 1600-CPM SINGLE ZONE</li> <li>▪ 2 Natural gas-fired burners</li> <li>▪ 5 MMBtu/hr maximum heat input</li> </ul>	None	PIN 1A PIN 1B PIN 1C
EU9	<b>Line 1 Lacquer Spray Machines (LSM)</b> <ul style="list-style-type: none"> <li>▪ Fisher Model 102MSH MARK3</li> <li>▪ 7 units @ 350 cans per minute*</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings.</li> <li>▪ Filtered to capture overspray.</li> </ul>	LSM 1A
EU10	<b>Line 1 Internal Bake Oven (IBO)</b> <ul style="list-style-type: none"> <li>▪ FECO Serial# 15241</li> <li>▪ 2 Natural gas-fired burners</li> <li>▪ 5.2 MMBtu/hr maximum heat input</li> </ul>	None	IBO 1A
<b>CAN COATING LINE 2</b>			
EU11	<b>Line 2 Decorator Unit</b> <ul style="list-style-type: none"> <li>▪ Concord Decorator-Alcoa Serial# 307301</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of low-VOC inks.</li> <li>▪ Use of low-VOC, 40 CFR Part 60 Subpart WW-compliant over-varnish.</li> <li>▪ Roll on application.</li> </ul>	None
EU12	<b>Line 2 Printer Oven (PIN)</b> <ul style="list-style-type: none"> <li>▪ OSI Model# R.H. Sigma / Serial #6882</li> <li>▪ 2 Natural gas-fired burners</li> <li>▪ 3 MMBtu/hr maximum heat input</li> </ul>	None	PIN 2A
EU13	<b>Line 2 Lacquer Spray Machines (LSM)</b> <ul style="list-style-type: none"> <li>▪ Fisher Model 102MSH MARK3</li> <li>▪ 7 units @ 350 cans per minute*</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use of 40 CFR Part 60 Subpart WW-compliant coatings.</li> <li>▪ Filtered to capture overspray.</li> </ul>	LSM 2A
EU14	<b>Line 2 Internal Bake Oven (IBO)</b> <ul style="list-style-type: none"> <li>▪ Ross Serial# LWD429-165</li> <li>▪ 2 Natural gas-fired burners</li> <li>▪ 5.2 MMBtu/hr maximum heat input</li> </ul>	None	IBO 2

\*Bodymakers limit plant production capacity to 3960 cans/min (18 units at 220 cans/min).

**TABLE 3.2 INSIGNIFICANT EMISSIONS UNITS**

Designator	IEU Name	Size/Capacity	Basis for IEU Designation
IEU1	Propane Gas Tank	500 gallons	WAC 173-401-533(2)(d)
IEU2	Space Heating (Eighteen natural gas-fired space heaters)	80,000 Btu/hr each	WAC 173-401-533(2)(r)
IEU3	Storage and Dispense of Acid Solution	Stored in 200-gallon, enclosed, plastic totes	WAC 173-401-533(2)(s)
<i>IEU4</i>	<i>[RECLASSIFIED AS EU5 - Cold Cleaners (Parts Washer). Redesignated based on actual emissions.]</i>		
IEU5	Cleaver Brooks Flexible Watertube Boiler (Natural-gas fired)	4.0 MMBtu/hr	WAC 173-401-533(e)
IEU6	Bryan Natural Gas Fired Boiler (Model RV400-W-FDG, Serial# 68319)	3.2 MMBtu/hr	WAC 173-401-533(e)
IEU7	10,000 gallon lacquer storage tank	10,000 gallons	WAC 173-401-533(2)(c)
IEU8	10,000 gallon over-varnish storage tank	10,000 gallons	WAC 173-401-533(2)(c)
IEU9	Waste Oil Tank	8000 gallons	WAC 173-401-532(3)
<i>IEU10</i>	<i>[RECLASSIFIED AS EU6 – Diesel Fire Pump Engine]</i>		
IEU11	Lime Storage Silo	1963 ft <sup>3</sup>	WAC 173-401-532(105)

#### 4.0 ACTUAL EMISSIONS 2014

Emissions at Crown include particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and volatile organic compounds (VOCs). Within the group of compounds emitted by Crown that are considered VOCs, there are some that are also classified as either Hazardous Air Pollutants (HAPs) under federal regulations and/or Toxic Air Pollutants (TAPs) under Chapter 173-460 WAC.

The majority of VOC and HAP emissions at Crown's Olympia facility are attributable to can coating. Can coating involves the application of liquid ink and lacquer to the can and then curing these coatings either in a heated curing oven (often referred to as force curing) or simply allowing the volatilization of liquids at ambient temperature and pressure. At Crown liquid ink is applied to the can surface directly by a metal cylinder leaving a decoration on the exterior surface of the can. Directly after the decoration is applied a protective varnish is applied by roller over it to protect the can's decorative label. The decoration and protective coating are then cured in printer ovens (referred to as PIN Oven 1 and PIN Oven 2).

The interior of the can is coated with a protective lacquer to prevent direct contact between the metal can surface and the beverage. The interior lacquer is spray applied and then subsequently cured in heated ovens (Interior Bake Oven (IBO) 1 and IBO 2).

With the exception of "cure HAPs", Crown calculates emissions of VOCs and HAPs that occur as a result of can coating using a mass balance approach. The mass balance approach assumes that all volatile components in the coating are ultimately emitted into the air as a gas.

Cure HAPs are those pollutants which form during the force curing process. The only known cure HAP at the Crown facility is formaldehyde. Formaldehyde emissions are calculated based on stack testing conducted at the facility in 2008 and 2009. The AOP requires testing to identify any other cure HAPs and to establish up-to-date emission factors for compliance with their facility-wide HAP limit.

A plant-wide VOC emission limit of 249 tons per year was established under 00MOD063 to limit potential to emit for VOCs from all emissions units at the facility. A plant-wide HAP emission limit was established under 05NOC420 to limit potential to emit for HAPs to less than 9.9 tons per year of any single HAP and less than 24.9 tons per year of all combined HAPs.

**Table 4.1 2014 Facility Wide Actual Emissions of Criteria Pollutants<sup>1</sup>**

Pollutant	2014 Emissions (ton/yr)
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	0.5
VOC	174.1
NO <sub>x</sub>	3.8
CO	0.8
SO <sub>x</sub>	0.002

**TABLE 4.2 2014 Facility Wide Actual Emissions of Hazardous and Toxic Air Pollutants<sup>1</sup>**

Pollutant	CAS Number <sup>2</sup>	Source of Emissions <sup>3</sup>	Classification <sup>4</sup>	2014 Emissions (lb/yr)
2-Butoxyethanol	111-76-2	CC	VOC, TAP	106,850
2-Dimethylaminoethanol	108-01-0	CC	VOC, TAP	37,042
Benzene	71-43-2	CNG	VOC, TAP, HAP	11
Ethylene glycol monohexyl ether	112-25-4	CC	VOC	3,619
Formaldehyde	50-00-0	CC	VOC, TAP, HAP	11,840
Hydrogen Fluoride	7664-39-3	CWO	HAP, TAP	141
Isopropanol	67-63-0	SCO	VOC, TAP	61,020
n-Butyl Alcohol	71-36-3	CC	VOC	106,488
Sulfuric Acid	7664-93-9	CWO	TAP	411
Total HAPs (tons/year)				7.8

<sup>1</sup>Annual emissions will vary from year to year based on operational conditions at the facility. Data presented above were summarized from the 2014 Annual Emission Inventory submitted to ORCAA in 2015.

<sup>2</sup>Chemical Abstract Service (CAS) Registry Numbers (often referred to as CAS RNs or CAS Numbers) are unique identifiers for chemical substances. A registry number itself has no inherent chemical significance but provides an unambiguous way to identify a chemical substance or molecular structure when there are many possible systematic, generic, proprietary, or trivial names.

<sup>3</sup>The source of emissions at the Crown Cork & Seal come from Combustion of Natural Gas (CNG), Solvent Cleaning Operations (SCO), Can Washing Operations (CWO), Can Coating (CC).

<sup>4</sup>Toxic Air Pollutant (TAP) as defined in Chapter 173-460 of the Washington Administrative Code (WAC), Hazardous Air Pollutant (HAP) as defined in Section 112 of the Federal Clean Air Act (FCAA), volatile organic compound (VOC) as defined in ORCAA 1.4.

## 5.0 REGULATORY DETERMINATIONS

### 5.1 Applicability of Title V of the Federal Clean Air Act

The Crown facility is a major source of volatile organic compounds (VOC) and, therefore, subject to Title V of the Federal Clean Air Act. Crown has operated under either a permit application shield or under a permit at all times it was subject to Title V permit requirements.

### 5.2 Applicability of New Source Performance Standards (NSPS)

#### 40 CFR Part 60 Subpart WW – Standards of Performance for the Beverage Can Surface Coating Industry

##### Applicable

The requirements of 40 CFR Part 60 Subpart WW (Subpart WW) apply to new, modified, or reconstructed facilities at beverage can surface coating lines including each exterior base coat operations, each overvarnish coating operations, and each inside spray coating operation provided the modification or reconstruction is commenced after November 26, 1980.

In March 1998 under NOC 97NOC040, Crown installed a new printing and over-varnish unit and PIN oven for use as a swing line. This constituted a modification of an affected facility and triggered requirements in Subpart WW of 40 CFR Part 60. An Initial Compliance Demonstration for Subpart WW was received by ORCAA on April 14, 1998 addressing compliance for two types of over-varnish (body varnish and UV bottom varnish) and inside spray coating.

The affected facility consists of five coating operations: three overvarnish coating operations (one bottom varnish and two body varnish) and two inside spray coating operations. Each coating operation consists of the coating application station, flashoff area, and curing oven. Crown does not have any exterior base coating operations at this facility, therefore, the exterior base coating limits are not currently applicable.

#### **40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

##### **Not Applicable**

The requirements of 40 CFR Part 60 Subpart IIII (Subpart IIII) apply to new, modified, or reconstructed of stationary compression ignition internal combustion engines that commenced construction after July 11, 2005 where the fire pump engine is manufactured after July 1, 2006 (April 1, 2006 for non-fire pump engines) or any unit modified or reconstructed after July 11, 2005.

Crown Cork and Seal has one stationary compression ignition internal combustion engine. The unit is a 149 hp diesel fire pump engine and was installed on January 1, 2006. Therefore, although the unit commenced construction after July 11, 2005, the unit was manufactured prior to July 1, 2006 and Subpart IIII does not apply.

#### **5.3 Applicability of National Emission Standard for Hazardous Air Pollutants (NESHAPs)**

##### **40 CFR Part 63 Subpart KKKK – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans**

##### **Not Applicable**

The National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans was promulgated on November 13, 2003 and applies to all metal can surface coating operations at major sources. This rule applies to owners or operators of metal can surface coating operations that use at least 5,700 liters (1,500 gallons) of coatings per year and are major sources of HAPs or are part of a major source.

In this case, Crown Cork & Seal USA, Inc. (Crown) has a federally enforceable, voluntary limit (established through 05NOC420) on emission of hazardous air pollutants (HAPs). This limit established Crown as minor source of HAPs. As a minor source of HAPs Crown is not subject to the requirements of 40 CFR Part 63 Subpart KKKK.

#### **40 CFR Part 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial Commercial and Institutional Boilers and Process Heaters**

##### **Not Applicable**

The National Emission Standards for Hazardous Air Pollutants for Industrial Commercial and Institutional Boilers and Process Heaters was promulgated on September 13, 2004 and applies to all existing industrial, commercial, or institutional boilers and process heaters located at a major source of HAPs; or each new or reconstructed industrial, commercial or institutional boiler and process heater located at a major source of HAPs.

In this case, Crown Cork & Seal USA, Inc. (Crown) has a federally enforceable, voluntary limit (established through 05NOC420) on emission of hazardous air pollutants (HAPs). This limit established Crown as minor source of HAPs. As a minor source of HAPs Crown is not subject to the requirements of 40 CFR Part 63 Subpart DDDDD.

#### **40 CFR Part 63, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources**

##### **Not Applicable**

In June of 2010, EPA proposed the NESHAP for boilers at area sources of hazardous air pollutants. The rule was signed by the EPA Administrator on February 22, 2011 and was posted on the Federal Register on March 21, 2011. Because Crown operates only boilers fueled by natural gas the requirements of Subpart JJJJJ do not apply (§63.11195(e)).

#### **40 CFR Part 63 Subpart EEEE - National Emission Standards for Hazardous Air Pollutants (NESHAP): Organic Liquid Distribution (Non-Gasoline)**

##### **Not Applicable**

The National Emission Standards for Hazardous Air Pollutants (NESHAP): Organic Liquid Distribution (Non-Gasoline) was promulgated on February 3, 2004 and applies to all new and existing organic liquid distribution (OLD) (Non-Gasoline) operations, which are carried out at storage terminals, refineries, crude oil pipeline stations, and various manufacturing facilities. These NESHAP implement section 112(d) of the Clean Air Act (CAA) by requiring all OLD operations at plant sites that are major sources to meet hazardous air pollutant (HAP) emissions standards reflecting the application of the maximum achievable control technology (MACT).

In this case, Crown Cork & Seal USA, Inc. (Crown) has a federally enforceable, voluntary limit (established through 05NOC420) on emission of hazardous air pollutants (HAPs). This limit established Crown as minor source of HAPs. As a minor source of HAPs Crown is not subject to the requirements of 40 CFR Part 63 Subpart EEEE.

#### **40 CFR Part 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (NESHAP): Reciprocating Internal Combustion Engines (RICE)**



### Applicable

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources for HAP emissions. In this case, Crown Cork & Seal USA, Inc. (Crown) has a federally enforceable, voluntary limit (established through 05NOC420) on emission of hazardous air pollutants (HAPs). This limit established Crown as an area source of HAPs. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

Crown Cork and Seal has one existing reciprocating internal combustion engine. The unit is a 149 hp diesel fire pump engine and was installed on January 1, 2006. Therefore, for the purposes of this standard, the unit is considered an existing emergency engine at an area source. Requirements for this type of engine include inspection and maintenance requirements, operating limitations, and recordkeeping requirements.

The following tables cross reference permit conditions to requirements in Subparts A and ZZZZ of Part 63 applicable to EU3. There is not a simple one-to-one correspondence between requirements in Part 63 and AOP conditions. Whenever possible, requirements in Subparts A and ZZZZ have been streamlined with existing conditions or combined with other applicable requirements. If a part of a requirement in Subpart A or ZZZZ was deemed by ORCAA to require special attention, it has been separated out into an independent condition. When the emission unit is subject to only part of a requirement, the inapplicable portions have been omitted from the related permit conditions.

Table 8 to Subpart ZZZZ lists the applicability of the General Provisions (Subpart A) of Part 63. If a section or subsection is listed in the table as applying, the section or subsection is reviewed to see if any AOP conditions need to be based on the section or subsection.

**Table 5.1: Conditions from 40 CFR Part 63 Subpart A as applied to EU3 with respect to Subpart ZZZZ**

Citation	Description	Applicable?	Condition
§ 63.1 - § 63.3	Applicability, definitions, units and abbreviations.	No	NA
§ 63.4(a)	Prohibited activities.	Yes	P4(a)
§ 63.4(a)(2)	No owner or operator subject to the provisions of this part shall fail to keep records as required under this part.	Yes	P4(a), RK16
§ 63.4(b)	Circumvention.	Yes	G11
§ 63.4(c)	Prohibits fragmentation.	If triggered	NA
§ 63.5	Preconstruction Review and notification requirements.	No	NA

Citation	Description	Applicable?	Condition
§ 63.6	Compliance with standards and maintenance requirements.	No	NA
§ 63.7	Testing requirements.	No	NA
§ 63.8(a)-(f)	Monitoring requirements.	No	NA
§ 63.9	Notifications.	No	NA
§ 63.10 (a)	Applicability and general requirements for recordkeeping and reporting.	No	NA
§ 63.10 (b)(1)	General recordkeeping requirements.	Yes	RK16
§ 63.10 (b)(2)	Recordkeeping requirements for SSM and CMS and CEMS.	No	NA
§ 63.10 (b)(3)	Recordkeeping for applicability determinations.	No	NA
§ 63.10 (c)	Additional recordkeeping requirements for sources with continuous monitoring systems.	No	NA
§ 63.10 (d)	General reporting requirements.	No	NA
§ 63.10 (e)	Additional reporting requirements for sources with continuous monitoring systems.	No	NA
§ 63.10 (f)	Waiver of recordkeeping or reporting requirements.	No	NA
§ 63.11	Control device and work practice standards.	No	NA
§ 63.12 – § 63.16	State authorities and delegations, agency addresses, incorporations by reference, availability of information and confidentiality, and performance track provisions.	No	NA

**Table 5.2: Conditions from 40 CFR Part 63 Subpart ZZZZ as applied to EU3**

Citation	Description	Applicable?	Condition
§ 63.6580	What is the purpose of subpart ZZZZ?	No	NA
§ 63.6585	Am I subject to this subpart?	No	NA
§ 63.6590	What parts of my plant does this subpart cover?	No	NA
§ 63.6595	When do I have to comply with the subpart?	Yes, compliance date May 3, 2013	NA. The compliance date has passed.
§ 63.6600-6602	Emission limitations for RICE at a major source	No	NA
§ 63.6603	Emission limitations and operating limitations for existing stationary CI RICE located at an area source of HAP emissions must meet the requirements in Table 2d and operating limitations in Table 2b.	Yes	AR6.1

Citation	Description	Applicable?	Condition
	Table 2d.1-3 Non-emergency, non-black start CI	No	NA
	Table 2d.4 Emergency CI and black start CI.	Yes	AR6.1
	Table 2d Footnote – Emergency operations and management practice requirements schedule. Reporting required.	Yes	AR6.1, R14
	Table 2b Operating Limitations for existing non-emergency CI RICE >500 hp	No	NA
§ 63.6604	Fuel requirements for non-emergency CI stationary RICE	No	NA
§ 63.6605(a)	Compliance required at all times.	Yes	P4(a)
§ 63.6605(b)	Operate affected source in a manner consistent with safety and good air pollutant control practices for minimizing emissions.	Yes	AR6.3
§ 63.6610-6611	Initial performance test requirements for major sources.	No	NA
§ 63.6612	Initial performance test requirements for area sources.	No	NA
§ 63.6615	Subsequent source test requirement.	No	NA
§ 63.6620	Requirements for performance tests.	No	NA
§ 63.6625(a)-(b)	Requirements for CEMS and CPMS.	No	NA
§ 63.6625(c)-(d)	Requirements for new or reconstructed stationary RICE.	No	NA
§ 63.6625(e)	Requirement to operate and maintain the stationary RICE and any control device according to manufacturer's emission-related written instructions or develop your own maintenance plan.	Yes	AR6.4
§ 63.6625(f)	Requirement to install a non-resettable hour meter if one is not already installed.	Yes	AR6.5
§ 63.6625(g)	Requirement for existing non-emergency CI.	No	NA
§ 63.6625(h)	Requirement to minimize the engine's times spent at idle during startup and minimize the engine's startup time.	Yes	AR6.6
§ 63.6625(i)	Option to use an oil analysis program to extend specified oil change requirement.	Yes	AR6.2
§ 63.6630	How to demonstrate initial compliance with the emission limitations and operating limitations.	No	NA
§ 63.6635	How do I monitor and collect data to demonstrate continuous compliance?	No	NA

Citation	Description	Applicable?	Condition
§ 63.6640(a)	Requirement to demonstrate compliance with standards in Table 2d according to the methods in Table 6.	Yes	AR6.4
	Table 6.1-8 Requirements for RICE at major sources.	No	NA
	Table 6.9 Requirements for existing stationary CI RICE not subject to any numerical emission limitation.	Yes	AR6.4
	Table 6.10-11 Requirements for existing stationary RICE > 500 hp.	No	NA
§ 63.6640(b)	Requirement to report any deviations from the applicable emission and operating limitations in Table 2d.	No	NA
§ 63.6640(c)	[Reserved]	NA	NA
§ 63.6640(d)	Requirement for new, reconstructed and rebuilt stationary RICE.	No	NA
§ 63.6640(e)	Requirement to report any deviations from applicable requirements in 40 CFR Subpart A.	No	NA
§ 63.6640(f)	Requirements for specific RICE including existing emergency stationary RICE located at area sources.	Yes	AR6.7
§ 63.6645	What notification must I submit and when?	No	NA
§ 63.6650	What reports must I submit and when?	No	NA
§ 63.6655(a)(1)	Requirement to keep records of all notification and reports submitted.	No	NA
§ 63.6655(a)(2)	Records of occurrence and duration of each malfunction.	Yes	RK16
§ 63.6655(a)(3)	Records of performance tests.	No	NA
§ 63.6655(a)(4)	Records of required maintenance.	Yes	RK16
§ 63.6655(a)(5)	Records of actions taken during periods of malfunction to minimize emissions.	Yes	RK16
§ 63.6655(b)	Records for CEMS and CPMS.	No	NA
§ 63.6655(c)	Reports for new or reconstructed RICE firing landfill or digester gas.	No	NA
§ 63.6655(d)	Requirement to keep records required in Table 6.	Yes	RK13
§ 63.6655(e)	Requirement to keep records of maintenance conducted.	Yes	RK16

Citation	Description	Applicable?	Condition
§ 63.6655(f)	Requirement to keep records of hours of operation including documentation of emergency hours and non-emergency hours.	Yes	RK16
§ 63.6660	In what form and how long must I keep my records?	Yes	RK1, RK16
§ 63.6665	General provisions that apply to this subpart are detailed in Table 8.	See Table 5.1 above.	
§ 63.6670	Who implements and enforces this subpart?	No	NA
§ 63.6675	What definitions apply to this subpart?	No	NA

#### 5.4 Applicability of Prevention of Signification Deterioration (PSD)

##### Not Applicable

In areas that currently meet the National Ambient Air Quality Standards, new major sources and major modifications (as defined under WAC 173-400-113(1)) are subject to federal new source review requirements under the Prevention of Significant Deterioration (PSD) program. The purpose of the PSD program is to maintain air quality in areas that currently meet the standards, and to provide additional air quality protection to areas where maintaining pristine air quality is required. Since all areas in ORCAA’s jurisdiction are currently listed as “in attainment” or “unclassified” with respect to the National Ambient Air Quality Standards, the PSD program applies to all new major sources and major modifications in ORCAA’s jurisdiction.

The terms “major source” and “major modification” are defined specifically for the PSD program under WAC 173-400-113. For certain special source categories, a major source under the PSD program is one that has a potential to emit greater than 100 tons per year of any pollutant subject to regulation under the Federal Clean Air Act. For general source types, a major source is one that has a potential to emit greater than 250 tons per year or more of any regulated pollutant. The Washington State Department of Ecology has been delegated by the U.S. Environmental Protection Agency to implement Washington’s PSD program in ORCAA’s jurisdiction. The goal of the PSD program is to insure that construction of new major stationary sources and major modifications will not significantly degrade areas with pre-existing good air quality.

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. The modifications were reviewed and approved by ORCAA and the Washington State Department of Ecology under PSD-87-1. A PSD Approval Order was issued on November 4, 1987 which contained several conditions of approval including a condition that emissions of VOC from the entire facility shall not exceed 291 tons per year.

In May of 1998, Crown received approval of emission reduction credits for discontinuing use of

end line #3. The Approval Order establishing the emission reduction credits contains several conditions including a condition which re-affirms the plant-wide VOC limitation of 291 tons per year and clarifies that this limit applies to any 12 consecutive month period. Another condition of the Approval Order states that the use of end line #3 shall be discontinued. The 291 ton per year, facility-wide VOC limit was later superseded by 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.

### **5.5 Applicability of Compliance Assurance Monitoring (CAM)**

#### **Not Applicable**

Compliance Assurance Monitoring (CAM) does not apply to Crown as Crown's emission units do not meet the applicability criteria in 40 CFR 64.2(a). Crown's emission units are only subject to an annual emission cap and Crown uses no control devices to achieve compliance with that standard. Therefore, CAM does not apply.

### **5.6 Applicability of the State Greenhouse Gas (GHG) Reporting Rule**

#### **Applicable**

According to WAC 173-441-030(1), the State GHG Reporting Rule applies to industrial facilities that emit at least 10,000 metric tons per year of GHG in terms of carbon dioxide equivalents (CO<sub>2</sub>e). Crown typically emits about 4,500 metric tons of CO<sub>2</sub>e each year which is clearly less than the applicability threshold of 10,000 metric tons of CO<sub>2</sub>e. However, based on the size of the combustion units at the facility potential emissions are approximately 20,000 metric tons of CO<sub>2</sub>e. Therefore, as actual emissions have the potential to increase above the reporting threshold, the requirements of the State GHG Reporting Rule are included in the permit.

## 6.0 Compliance History

ORCAA has issued six notices of violations (NOV) to Crown.

**Table 6.1: Air Compliance History Summary**

<b>Date Issued</b>	<b>NOV #</b>	<b>Description</b>	<b>Resolution</b>
3/13/2000	1638	Failure to obtain a minor source new source review permit for the lacquer spray machines prior to construction.	A civil penalty of \$100 was paid on July 12, 2000.
11/20/2002	1098 and 1099	Failure to submit the Semi-Annual Compliance Monitoring Report in a timely manner (NOV 1098), and failure to submit the Annual Compliance Certification Report (NOV 1099) in a timely manner.	A combined civil penalty of \$100 was paid on January 10, 2003.
12/3/2003	2120	Failure to submit the Semi-Annual Compliance Monitoring Report in a timely manner.	A civil penalty of \$1000 was paid on February 9, 2004.
9/12/2011	3077	Failure to submit AOP renewal application in a timely manner.	A civil penalty of \$4000 was paid on January 31, 2012.
7/16/2013	3120	Failure to monitor material usage as required.	A civil penalty of \$2000 was paid on November 1, 2013.
10/5/2015	3384	Failure to submit AOP renewal application in a timely manner.	Currently being appealed

## 7.0 NOTICES OF CONSTRUCTION

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 7.1 provides a summary of NOC approvals and conditions from all NOC Orders of Approval and the status of each condition in Crown's AOP.

### **Regulatory Order – 1972 (EQUIPMENT REMOVED)**

A Regulatory Order was issued in 1972 for installation of a fume incinerator. The fume incinerator was used to incinerate potentially harmful pollutants being emitted from the three can lines in existence at the time. At the time of this order, the facility was not subject to any limitations by Regulatory Order, and there were no performance standards that applied. The fume incinerator was removed from service in the 1980s.

### **PSD-87-1 (SUPERSEDED)**

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. The modifications were jointly reviewed and approved by ORCAA and the Washington State Department of Ecology under PSD-87-1. A PSD Approval Order was issued on November 4, 1987 which contained several conditions of approval including a condition that emissions of VOC from the entire facility shall not exceed 291 tons per year. Conditions of PSD-87-1 were superseded by 00MOD247. As a result, the 291 ton/yr VOC limit is no longer in effect.

### **91NOC455 (EQUIPMENT REMOVED)**

On December 23, 1991, under NOC# 91NOC455, Crown received approval to install a 3<sup>rd</sup> can end line. This approval specifically limited emissions from the 3<sup>rd</sup> end line to no more than 39.1 tons of VOC per year and no more than 3.3 tons of VOC per day. As the enforceable increase in emissions was below the PSD significance levels for VOCs, a PSD review was not triggered. The 39.1 ton per year limit on the 3<sup>rd</sup> end line brought the total facility enforceable emissions to 330.1 tons per year of VOC. Crown discontinued use of end line # in 1998.

### **95NOC641 (EU3)**

On June 20, 1995, under NOC# 95NOC641, Crown received approval to install a new can washer. The can washers clean and etch the cans prior to coating using hydrofluoric and sulfuric acid washes. The approval order issued for this NOC imposes limitations on the acid concentration of the wash solution used and the total amount of wash solutions used.

### **95NOC662 (RESCINDED)**

On October 5, 1995, under NOC# 95NOC662, Crown received approval to install a new gas fired boiler. The boiler is used as a water heater for the can washers. 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 issues the rescission on April 1, 2016.

#### **97NOC040 (SUPERSEDED)**

In 1997 under NOC# 97NOC040, Crown received approval to install a new printing and over-vernish unit and PIN oven. These units serve as a backup to the three existing printing and oververnish units and PIN ovens. When one of these units is down for label change or maintenance, the backup unit will take its place. The printing and oververnish unit and PIN oven were approved subject to existing 291 tons per year limit imposed on the facility as well as several other Approval Order conditions. 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 oververnish 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. Notification of the Final Determination was made to EPA Region 10 by ORCAA. Initial performance testing as required in both Subpart WW and in the general regulations of Subpart A was conducted and compliance reports were filed with ORCAA. Also, it is ORCAA's understanding that EPA Region 10 was forwarded duplicate copies of all compliance related reports after this approval. In this case, as Crown does not use a control device, and as solvents are not added to any coatings, performance testing consisted of verification using data from coating manufacturer Safety Data Sheets that each coating was in compliance with the Subpart WW standards. This compliance approach is allowed for under §60.493(b)(1)(iv).

#### **98-ERC-018 (SUPERSEDED)**

In May of 1998, Crown received approval of emission reduction credits (ERC) for discontinuing use of end line #3. The Approval Order establishing the emission reduction credits contains several conditions including a condition which re-affirms the plant-wide VOC limitation of 291 tons per year and clarifies that this limit applies to any 12 consecutive month period. Another condition of the Approval Order states that the use of end line #3 shall be discontinued. The 291 ton per year, facility-wide VOC limit was later superceded by 00MOD063.

The amount of emission reduction credits approved by ORCAA for discontinuing end line #3 was 24.5 tons per year of VOCs. This amount was verified by ORCAA and represents the average actual emissions from end line #3 during the 2 year period preceding the application. The ERC is no longer valid.

#### **98NOC021 (EU4, EU7, EU8, EU9, EU11, EU12, EU13)**

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. The new can lines were completed in January 2000. The printer/PIN oven permitted under 97NOC040 was retained for use as a primary line, not a swing line. A new printer and PIN oven was installed as a second line. The existing LSMs were reconfigured from three banks (lines) to two. The existing IBOs were not changed.

**99NOC029 (WITHDRAWN)**

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.

**99NOC033 (EQUIPMENT REMOVED)**

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 (Crown Cork & Seal February 21, 2001 inspection report) and was removed (Crown Cork & Seal February 25, 2002 inspection report).

**00MOD063 (FACILITY-WIDE)**

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. The ORCAA issued permit incorporated the applicable conditions of PSD-87-1.

**00NOC027 (EU3)**

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.

**00NOC034 (EU9, EU13)**

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). Each of the new units was capable of running 350 cans per minute. Therefore, the lacquer spray machines had the potential to produce 5.6 million cans per day. However, facility production at that time was still limited by the cupping machines to 5 million cans per day.

**00NOC059 (FACILITY-WIDE)**

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 new presses had a higher capacity, and therefore would increase the facility capacity. The can production bottleneck then became the can washer, with a capacity of 3960 cans/min.

**02NOC273 (FACILITY-WIDE)**

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. The process equipment to be vented to the stacks were two Rotary Fuller Vacuum Pumps and three vacuum blowers.

**05NOC420 (FACILITY-WIDE)**

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.

**08NOC622 (EU1, EU2)**

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. Although the can washer has a higher capacity than the one it replaced, the bodymakers limit the production capacity of the plant to 3960 cans/min (18 units at 220 cans/min).

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
Regulatory Order (8/24/72)	NOC for Fume Incinerator. Conditions are now inapplicable. Terminating use of incinerator approved by ORCAA verbally after approval of use of low VOC coatings for end line and establishment of facility-wide VOC cap under PSD-87-1.		
PSD-87-1 (11/4/87)	Plant expansion and addition of end line. This order was rescinded on 9/13/00 through 00MOD063.		
91-NOC-455 (12/23/91)	NOC for installation of 3rd End Line. Use of end line #3 terminated in December of 1997.		
95-NOC-641 New can washer (6/20/95)	1.	Requires notice of completion.	Not an ongoing applicable requirement. Construction was completed and ORCAA was notified of completion of construction.
	2.	Establishes usage and concentration limits for the sulfuric and hydrofluoric acid used in the can washers.	Applicable Requirement Condition AR2.1
	3.	Establishes requirements for keeping records of the composition and usage of can washing solutions.	Monitoring Requirement Condition RK15
	4.	Requires that material composition and usage information be reported to ORCAA upon request.	Reporting Requirement covered by Condition P4(e)
95-NOC-662 Bryan Boiler (10/27/95)	NOC for 3.2 MMBtu/hr natural gas boiler (Bryan). Order rescinded April 1, 2016.		
97-NOC-040 New can line	NOC for can coating swing line. Superseded by 98NOC021.		

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
98-ERC-018	Order establishing emission reduction credits for discontinuing end line #3. This order was rescinded on August 24, 2000.		
98NOC021 (6/18/98) NOC approval to replace the existing can coating lines at the Olympia facility with two new lines.	1.	Plant modifications shall be in accordance with the information and specifications as described in the associated NOC.	Not an ongoing applicable requirement. Equipment specifications are used as a point of reference for determining future modifications which may trigger new source review requirements.
	2.	VOC emissions from each exterior base coating operation, each over- varnish coating operation, and each inside spray coating operation shall not exceed the following volume- weighted, calendar-month average VOC emission limits: a) 0.29 kilograms of VOC per liter of coating solids from each two-piece can exterior base coating operation, except clear coat; b) 0.46 kilogram of VOC per liter of coating solids from the two-piece can clear base coating operation and from the over- varnish coating operation; and, c) 0.89 kilograms of VOC per liter of coating solids from the two-piece can inside spray coating operation.	Applicable Requirement AR1.1 (Note: Crown does not have any exterior base coating operations at this facility, so those limits for exterior base coating are not applicable.)
	3.	The methods and procedures defined in §60.493(b) shall be used to demonstrate compliance with the VOC standards in Condition 2.	Applicable Requirement M11

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
	4.	Compliance with Condition 2 standards shall be demonstrated within 60 days after achieving the maximum production rate of the facility, but not later than 180 days after initial startup of the new can printer and printer oven.	Not an ongoing requirement. Initial compliance report received by ORCAA April 14, 1998.
	5.	Compliance with Condition 2 standards shall be demonstrated monthly after initial compliance is demonstrated.	Applicable Requirement M11
	6.	The following reports shall be submitted to ORCAA and EPA Administrator in care of EPA Region 10 within the time frames specified: (a) An initial compliance report containing the data and information specified in §60.495(a)(1) shall be submitted within 180 days after initial start-up; and, (b) Following initial compliance demonstration, quarterly compliance reports containing the data and information specified in §60.495(b).	NOC Condition 6(a) is not an ongoing requirement. Initial compliance report received by ORCAA April 14, 1998.  NOC Condition 6(b) is an applicable requirement reflected in AOP Condition R11.
	7.	Records of all data and calculations used to determine VOC emissions for purposes of the initial and monthly compliance demonstrations shall be maintained at the plant site for a period of at least five years.	Applicable Requirement RK1
	8.	The owner or operator shall notify ORCAA in writing of the actual date construction is completed within 15 days after such date by completing and returning NOC Form 3 to ORCAA.	Not an ongoing applicable requirement.
99NOC033 New can line	NOC for can coating swing line. Swing line was removed in 2001.		

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
00MOD063 Revision to 87NOC383 to lower the VOC emission limit from 291 tons per year to 249 tons per year (August 24, 2000)	1.	Facility-wide emissions of volatile organic compounds (VOC) shall not exceed 249 tons per consecutive twelve-month period.	Applicable Requirement PW12
	2.	The owner or operator shall monitor compliance with condition #1 on at least a monthly basis by computing the actual VOC emissions from the facility over the previous month and previous twelve-month consecutive period...	Applicable Requirement M9
00NOC027 NOC for concentrated sulfuric acid solution in the can washer (July 13, 2000)	1.	Total cumulative use of concentrated (>60%) sulfuric acid can washing solution used in the can washer shall not exceed 5000 gallons per consecutive 12-month period.	Applicable Requirement AR2.1
	2.	The owner or operator shall monitor compliance with condition 1 on at least a monthly basis by computing the actual amount of concentrated (>60%) sulfuric acid can washing solution used over the previous month and previous 12 consecutive month period based on company records and a monthly inventory of the washing solution.	Applicable Requirement M13
00NOC034 (June 23, 2000)	NOC to replace three inside lacquer spray machines with two new machines. This permitting action resulted in no conditions of approval and no new applicable requirements		
00NOC059 (August 24, 2000)	NOC to install two cupping presses. This permitting action resulted in no conditions of approval and no new applicable requirements		
02NOC273 (May 7, 2003)	NOC to install four roof top stacks to vent process air from equipment that currently vents into the interior of the building. This permitting action resulted in no conditions of approval and no new applicable requirements		

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
05NOC420 NOC to establish facility-wide hazardous air pollutant (HAP) limit	1.	Facility-wide emissions of hazardous air pollutants (HAPs) which have been listed pursuant to Section 112(b) of the Federal Clean Air Act (HAPs) shall be less than 9.9 tons of any single HAP, and shall be less than 24.9 tons of all combined HAPs, during any 12 consecutive months after the date of this Order of Approval.	Applicable Requirement Condition PW13
	2.	The owner or operator shall monitor all products used at the facility that contribute to HAP emissions, and shall maintain on-site, material safety data sheets or certified product data sheets for these products. This requirement shall not apply to janitorial and office supplies.	Applicable Requirement Condition RK14
	3.	Within 30 days of the end of each month, the owner or operator shall estimate monthly emissions of HAPs, using a mass balance approach, and prepare monthly records that demonstrate that annual emissions do not exceed the limits in Condition 1. Records shall include the following: <ul style="list-style-type: none"> <li>a) Monthly emissions of each individual HAP emitted from the facility not including HAP emissions resulting from the use of janitorial and office supplies,</li> <li>b) Monthly total of all HAPs combined, and</li> <li>c) A rolling total of emissions over the previous 12-month period.</li> </ul>	Applicable Requirement Conditions M10; RK15

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
	4.	The owner or operator shall notify the Olympic Region Clean Air Agency, in writing, within 30 days after the end of each 12-month period if, during that period, emissions of any single HAP exceeded 8.5 tons, or emissions of all HAPs exceeded 22 tons. The report shall include emissions data for the time period for which these thresholds were exceeded.	Applicable Requirement Condition R12
	5.	The owner or operator shall credit shipments of hazardous wastes in the mass balance calculation 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.	Applicable Requirement Condition M8
08NOC622	1.	Pollution generating equipment, air pollution control devices and operations at the facility shall be in accordance with the information and specifications described in the associated NOC application unless otherwise specified by condition in this Approval Order.	Not an ongoing applicable requirement.



**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
	2.	<p>The owner or operator shall limit the consumption of sulfuric acid and hydrofluoric acid used to formulate the can washer solution in the following ways:</p> <ul style="list-style-type: none"> <li>a. The total cumulative use of low concentration sulfuric acid used to formulate the can washing solution shall not exceed 50,000 gallons per consecutive 12-month period;</li> <li>b. The low concentration sulfuric acid shall contain no more than 60 percent sulfuric acid by weight;</li> <li>c. Total cumulative use of the hydrofluoric acid used to formulate the can washing solution shall not exceed 24,000 gallons per consecutive 12-month period;</li> <li>d. Percent by weight of hydrogen fluoride in the hydrofluoric acid used to formulate the can washing solution shall not exceed 40 percent by weight; and</li> <li>e. The total cumulative use of high concentration sulfuric acid (sulfuric acid with a concentration of greater than 60% by weight) used to formulate the can washing solution shall not exceed 5,000 gallons in any consecutive 12-month period.</li> </ul>	Applicable Requirement Condition AR2.1

**Table 7.1 Summary of Air Regulatory History**

NOC # (date)	NOC CONDITION	DESCRIPTION (for information only)	APPLICABILITY AOP CONDITION #
	3.	The owner or operator shall monitor, on at least a monthly basis, the actual amount of low concentration sulfuric acid (less than 60% sulfuric acid by weight), hydrofluoric acid, and high concentration sulfuric acid (greater than 60% sulfuric acid by weight) consumed in the can washer.	Applicable Requirement Condition M12
	4.	The owner or operator shall record the actual amount of low concentration sulfuric acid (less than 60% sulfuric acid by weight), hydrofluoric acid, and high concentration sulfuric acid (greater than 60% sulfuric acid by weight) consumed in the can washer. The record of the actual amount of low concentration sulfuric acid (less than 60% sulfuric acid by weight), hydrofluoric acid, and high concentration sulfuric acid (greater than 60% sulfuric acid by weight) shall be maintained as a 12-month rolling sum.	Applicable Requirement Condition RK14
	5.	The owner or operator shall update the facility Operations and Maintenance (O&M) plan to include procedures specific to operation and maintenance of the new can washer.	Applicable Requirement Condition AR2.2

## **8.0 Permit Renewal, Revocation, Reopening, and Revisions**

### **8.1 Permit Renewal (WAC 173-401-710)**

Air Operating Permits are issued with a fixed term of five years. Unless the permittee submits a complete permit renewal application no later than twelve months before the expiration date, this AOP will expire five years from the issuance date. If a complete application is received in a timely manner, the AOP will remain in effect until a new AOP is issued or the application is denied.

The same procedural requirements that apply to a new AOP apply to permit renewal, including public participation and affected state and EPA review.

If ORCAA denies an application for a permit renewal, the same procedure for permit revocation (see 9.2 below) applies. Denial of a renewal application can be contested by filing an appeal with the Pollution Control Hearings Board and serving a copy upon ORCAA within 30 days of receipt of the denial.

### **8.2 Permit Revocation (WAC 173-401-710)**

ORCAA may revoke the AOP at the request of the permittee or for cause. At least 30 days prior to revocation, ORCAA will submit a written notice to the permittee explaining the basis for the revocation and allowing the permittee an opportunity to meet with ORCAA. ORCAA may issue conditional revocations with a future effective date.

Revocation of an AOP can be contested by filing an appeal with the Pollution Control Hearings Board and serving a copy upon ORCAA within 30 days of receipt of the denial.

### **8.3 Reopening for Cause (WAC 173-401-730)**

ORCAA will reopen and revise the AOP if any of the following occurs:

1. Additional requirements become applicable and the remaining permit term is three years or longer.
2. Additional requirements become applicable under the acid rain program.
3. ORCAA or the EPA determines that the AOP contains a material mistake or inaccurate information was used to set any of the terms or conditions of the permit.
4. ORCAA or the EPA determines that the AOP must be revised to assure compliance with any applicable requirement.

ORCAA will provide the permittee at least 30 days written notice before reopening an AOP for cause, unless an emergency requires a shorter time period. The same procedural requirements that apply to a new AOP apply to reopening and reissuing an AOP, including public participation and affected state and EPA review, except that only those part of the permit that have been modified are affected.

#### **8.4 Administrative Permit Amendments (WAC 173-401-720)**

An administrative permit amendment is a permit revision that:

1. Corrects typographical errors;
2. Identifies a name change, contact information, or similar administrative change;
3. Requires more frequent monitoring or record keeping;
4. Allows for a change in ownership or control; or
5. Incorporates conditions from a notice of construction (NOC), provided the NOC approval process substantially meets the same requirements as an AOP modification and no gap filling is required to verify compliance.

The permittee may request an administrative amendment, which ORCAA will either incorporate into the permit or deny within sixty days. ORCAA will then submit the revised permit to EPA.

#### **8.5 Changes not Requiring Permit Revisions (WAC 173-401-722)**

The permittee may make a change at an AOP applicable facility without a permit revision if all of the following conditions are met:

1. The proposed changes are not Title 1 modifications;
2. The proposed changes do not result in an increase in emissions, either a rate or a total, beyond what is allowed by the permit;
3. The proposed changes do not alter permit terms required to enforce limitation on emissions from emission units covered by the permit; and
4. The permittee provides ORCAA and EPA written notification of the proposed changes at least seven days prior to making the changes, unless an emergency requires swifter action.

A Title 1 modification is defined as any modification subject to a Part 111 standard (NSPS) or a Part 112 standard (NESHAP) or is subject to preconstruction review under the PSD program or in a nonattainment area.

#### **8.6 Minor Permit Modifications (WAC 173-401-725(2)-(3))**

A change that does require a permit revision may be classified as a minor permit modification if it meets the following conditions:

1. No applicable requirements are violated;
2. There are no *significant* changes to monitoring, reporting, or record keeping requirements;
3. There are no changes to case-by-case determinations regarding an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. The changes do not establish or change a permit term or condition assumed by the source for the purpose of avoiding an applicable requirement; and
5. No Title 1 modifications are proposed.

As stated in section 9.5, a Title 1 modification is defined as any modification subject to a Part 111 standard (NSPS) or a Part 112 standard (NESHAP) or is subject to preconstruction review under the PSD program or in a nonattainment area.

Requests for minor permit modifications must be made on official forms supplied by ORCAA and certified by a responsible official. Once ORCAA declares the application complete, it is ORCAA's responsibility to notify the EPA administrator and affected states and post notice on the Permit Register, which initiates a 21-day comment period.

Within 90 days of receiving an application for a minor permit modification or within 15 days after the end of EPA's 45-day review period, whichever comes last, ORCAA shall either:

1. Issue the modification as proposed;
2. Deny the proposed modification;
3. Determine that the proposed modification should be resubmitted as a major permit modification; or
4. Revise the draft permit modification and transmit to EPA.

The permittee may make the proposed changes immediately upon requesting the modification (unless a notice of construction is required). However, the permittee must continue to comply with the applicable requirements governing the change and the proposed terms and conditions. During this time period, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the source fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it.

### **8.7 Significant Permit Modifications (WAC 173-401-725(4))**

A change that does require a permit revision and does not qualify as a minor permit modification is a significant permit modification. Significant permit modifications must meet all the requirements of Chapter 173-401 WAC, including those for applications, public participation, review by affected states, and review by EPA, as they apply to permit issuance and permit renewal. ORCAA shall complete review on the majority of significant permit modifications within nine months after receipt of a complete application.

## 9.0 REGULATORY BASIS

Table 9.1 provides the regulatory basis for each permit condition as required by WAC 173-401-600(2) and §70.6(a)(1).

**TABLE 9.1 STATEMENT OF BASIS**

CONDITION	REGULATORY BASIS
<b>Permit Terms and Provisions</b>	
P1. Permit Duration	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-610
P2. Federally Enforceable Requirements	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-625
P3. Compliance Maintenance	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-510(2)(h)(iii); WAC 173-401-630(3)
P4. Standard Conditions	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-620(2); §63.4(a)(1); §63.4(a)(2)
P5. Duty to Supplement or Correct Application	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-500(6)
P6. False or Misleading Statements	Permit Terms and Provisions Authority: WAC 173-401-600(1)(b) Origin: <i>State/Local only</i> : WAC 173-400-105; <i>Local only</i> : ORCAA 7.2
P7. Permit Renewal Application	Permit Terms and Provisions Authority: WAC 173-401-710(1) Origin: WAC 173-401-710(1)
P8. Permit Expiration – Application Shield	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-710(3)
P9. Permit Revocation	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-710(4)
P10. Reopening for Cause	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-730

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
P11. Changes not Requiring Permit Revision/Off Permit Changes	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-722; WAC 173-401-724
P12. Administrative Permit Amendments	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-720
P13. Permit Modifications	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-725
P14. Greenhouse Gas Reporting Fee	Permit Terms and Provisions Authority: WAC 173-401-600(1)(b) Origin: <i>State Only</i> : WAC 173-441-110
P15. Confidential Information	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a)&(b) Origin: WAC 173-401-500(5); <i>Local only</i> : ORCAA Rule 1.6; WAC 173-401-630(1)
P16. Credible Evidence	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: 40 CFR 51.212; 40 CFR 52.12; 40 CFR 52.33; 40 CFR 60.11(g); 40 CFR 61.12
P17. Emergency as Affirmative Defense	Permit Terms and Provisions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-645
P18. Unavoidable Excess Emissions Excused	Permit Terms and Provisions Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-107(6); <i>Local Only</i> : ORCAA 8.7(c)
P19. Certification	Permit Terms and Provisions Authority: WAC 173-401-630(1) Origin: WAC 173-401-520; WAC 173-401-615(3)(a); §63.2520(e)(2)
<b>General Terms and Conditions</b>	
G1. Inspection and Entry	General Terms and Conditions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-630(2)
G2. Access for Inspection	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: ORCAA 1.5(e) <i>state/local only</i>

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
G3. Insignificant Emission Unit - Restriction	General Terms and Conditions Authority: WAC 173-401-600(1)(a) Origin: WAC 173-401-530
G4. New Source Review	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 6.1
G5. Replacement or Substantial Alteration of Existing Control Equipment	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 6.1.10
G6. Temporary Sources	General Terms and Conditions Authority: WAC 173-401-600(1)(a)&(b) Origin: WAC 173-401-635; ORCAA 6.1.1
G7. Demolition and Asbestos Projects	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: ORCAA 6.3.2 <i>state/local only</i>
G8. Demolition and Renovation Projects	General Terms and Conditions Authority: WAC 173-401-600(1)(a) Origin: 40 CFR Part 61, Subpart M
G9. Protection of Stratospheric Ozone	General Terms and Conditions Authority: WAC 173-401-600(1)(a) Origin: 40 CFR Part 82, Subparts B & F
G10. Prohibition of Emissions Detrimental to Persons or Property	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: <i>State/Local Only</i> : WAC 173-400-040(6); <i>Local Only</i> : ORCAA 7.6
G11. Concealment and Masking Prohibited	General Terms and Conditions Authority: WAC 173-401-600(1)(b) Origin: §60.12; §63.4(b); <i>State/Local Only</i> : WAC 173-400-040(8); <i>Local Only</i> : ORCAA 7.5
<b>Applicable Plant-Wide Requirements</b>	
PW1. Fallout	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: <i>State/Local Only</i> : WAC 173-400-040(3); <i>Local Only</i> : ORCAA 8.3(e)
PW2. Odor Control (state)	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b)
PW3. Odor Control (ORCAA)	Applicable Plant-wide Requirements Authority: <i>State/Local Only</i> : WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.5



<b>CONDITION</b>	<b>REGULATORY BASIS</b>
PW4. Fugitive Emissions Control	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-040(4)(a)
PW5. Fugitive Dust Control	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: <i>State/Local Only</i> : WAC 173-400-040(9)(a); <i>Local Only</i> : ORCAA 8.3(c)
PW6. Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
PW7. General Standards for Maximum Visual Emissions	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-040(2); ORCAA 8.2 <i>state/local only</i>
PW8. Sulfur Dioxide	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-040(7)
PW9. General Particulate Standards for Combustion Units (State)	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-050(1)
PW10. General Particulate Standards for Combustion Units (ORCAA)	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: ORCAA 8.3(a) <i>local only</i>
PW11. General Emission Standards for Process Units	Applicable Plant-wide Requirements Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-060
PW12. Facility-Wide VOC Emission Limit	Applicable Plant-wide Requirements Authority: WAC 173-401-605(1) Origin: 00MOD063 Condition 1
PW13. Facility-Wide HAP Emission Limit	Applicable Plant-wide Requirements Authority: WAC 173-401-605(1) Origin: 05NOC420 Condition 1
PW14. Can Washer Solution Requirements	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 95NOC641 Condition 2; 00NOC027 Condition 1; 08NOC622 Condition 2
<b>Applicable Requirements for Line B Can Washer (EU1)</b>	
AR1.1 Can Washer O&M	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 08NOC622 Condition 5
<b>Applicable Requirements for Line B Washer Natural Gas-Fired Dryer (EU2)</b>	

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
AR2.1 Can Washer O&M	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 08NOC622 Condition 5
AR2.2 Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
<b>Applicable Requirements for Line A Can Washer (EU3)</b>	
AR3.1 Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
<b>Applicable Requirements for Rim Coater with UV Cure (EU4)</b>	
AR4.1 Applicable Subpart WW Emission Standards	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR 60.492; 98NOC021 Condition 2
AR4.2 Subpart A Operations and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-600(1) Origin: 40 CFR 60.11(d)
<b>Applicable Requirements for Emergency Fire Pump Engine (EU6)</b>	
AR6.1 Subpart ZZZZ Management Practice Requirements	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6603; §63.6603 Table 2d
AR6.2 Subpart ZZZZ Optional Oil Analysis Program	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6625(i); §63.6595
AR6.3 Subpart ZZZZ Operation and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6605(b); §63.6625(e)
AR6.4 Subpart ZZZ Maintenance Plan	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6625(e); §63.6640(a); §63.6640(a) Table 6.9; §63.6625(i)
AR6.5 Subpart ZZZZ Equipment Requirement	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6625(f)

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
AR6.6 Subpart ZZZZ Startup Requirements	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6625(h)
AR6.7 Subpart ZZZZ Operating Limitations	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR Part 63 Subpart ZZZZ §63.6595; §63.6640(f)
AR6.8 Sulfur Dioxide	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: WAC 173-400-040(7)
<b>Applicable Requirements for Decorator Units – Line 1 and 2 (EU7 and EU11)</b>	
AR7.1 Applicable Subpart WW Emission Standards	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR 60.492; 98NOC021 Condition 2
AR7.2 Subpart A Operations and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-600(1) Origin: 40 CFR 60.11(d)
<b>Applicable Requirements for Printer (PIN) Ovens – Line 1 and 2 (EU8 and EU12)</b>	
AR8.1 Subpart A Operations and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-600(1) Origin: 40 CFR 60.11(d)
AR8.2 Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
<b>Applicable Requirements for Lacquer Spray Machines – Line 1 and 2 (EU9 and EU13)</b>	
AR9.1 Applicable Subpart WW Emission Standards	Applicable Requirement Authority: WAC 173-401-605(1) Origin: 40 CFR 60.492; 98NOC021 Condition 2
AR9.2 Subpart A Operations and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-600(1) Origin: 40 CFR 60.11(d)
AR9.3 Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
<b>Applicable Requirements for Internal Bake Ovens (IBO) (EU10 and EU14)</b>	
AR10.1 Subpart A Operations and Maintenance Requirements	Applicable Requirement Authority: WAC 173-401-600(1) Origin: 40 CFR 60.11(d)

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
AR10.2 Maintenance and Repair of Air Pollution Control Equipment and Processes	Applicable Requirement Authority: WAC 173-401-600(1)(b) Origin: <i>Local Only</i> : ORCAA 8.8
<b>Monitoring Terms and Conditions – Plant-wide Monitoring</b>	
M1. Opacity Surveys	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M2. Opacity Compliance Demonstration Required	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M3. Opacity Reading Procedures	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M4. Complaint Monitoring	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M5. Fugitive Emissions and Dust Control Monitoring	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M6. GHG Monitoring Requirements	Applicable Requirement Authority: WAC 173-401-615 Origin: <i>State only</i> : Chapter 173-441 WAC
M7. General Source Test Procedures and Methods	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-400-105(4); <i>Local only</i> : ORCAA 1.5(j)
M8. Pollution Control Equipment Monitoring	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
M9. Emissions Monitoring	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b); 00MOD063 Condition 2; 05NOC420 Condition 2; 05NOC420 Condition 5
M10. Monitoring Compliance with Annual VOC Emission Limit	Applicable Requirement Authority: WAC 173-401-615(1)(b) Origin: ORCAA 8.11; WAC 173-400-105; 00MOD063 Condition 2
M11. Monitoring Compliance with Annual HAP Emission Limit	Applicable Requirement Authority: WAC 173-401-615(1)(b) Origin: 05NOC420 Condition 3

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
M12. Cure HAP Testing	Applicable Requirement Authority: WAC 173-401-615(2) Origin: WAC 173-401-615(2)
<b>Monitoring Terms and Conditions – EU1 and EU3 Can Washing Solution Monitoring</b>	
M13. Monitoring Compliance with Can Washing Solution Limits	Applicable Requirement Authority: WAC 173-401-615(1)(a) Origin: 95NOC641 Condition 2; 00NOC027 Condition 1; 08NOC622 Condition 3
<b>Monitoring Terms and Conditions – EU4, EU7, EU9, EU11, EU13 Subpart WW Monitoring</b>	
M14. Subpart WW Monthly Performance Testing Requirements and Methods	Applicable Requirement Authority: WAC 173-401-615(1)(a) Origin: §60.493(b)(1); 40 CFR 60.496(a)(1); 40 CFR 60.496(b)
<b>Monitoring Terms and Conditions – EU6 Emergency Fire Pump Engine Monitoring</b>	
M15. Sulfur Dioxide Emissions Monitoring	Applicable Requirement Authority: WAC 173-401-615 Origin: WAC 173-401-615(1)(b)
<b>Recordkeeping Conditions</b>	
RK1. Retention and Availability of Records.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(2)(c); §63.6660
RK2. Record of Changes.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(2)(b); WAC 173-401-724(5)
RK3. Monitoring Records.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(2)(a)
RK4. Record of Permit Deviations.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(3)(b)
RK5. Availability of Emissions Records	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: <i>Local Only</i> : ORCAA 8.11(b)
RK6. Emissions Records	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-400-105(1); ORCAA 8.11(a)
RK7. Unlawful Reproduction or Alteration of Documents.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: <i>Local Only</i> : ORCAA 7.3

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
RK8. Display of Orders, Certificates and Other Notices.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: <i>Local Only</i> : ORCAA 7.4
RK9. Record of Complaints.	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(2)(a)
RK10. Record of Actions Taken	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: WAC 173-401-615(2)(a)
RK11. MACT Applicability Records	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: 40 CFR 63.1(b)(3); 40 CFR 63.10(b)(3)
RK12. Records Required for Greenhouse Gas (GHG) Reporting	Recordkeeping Conditions Authority: WAC 173-401-615 Origin: <i>State only</i> : WAC 173-441-050(6)
RK13. Operations and Maintenance Plan Records	Recordkeeping Conditions Authority: WAC 173-401-615(2) Origin: ORCAA 8.11; §63.6655(d)
RK14. Material Composition Records	Recordkeeping Conditions Authority: WAC 173-401-615(2)(a) Origin: 05NOC420 Condition 2
RK15. Material Use Records	Recordkeeping Conditions Authority: WAC 173-401-615(1)(b)&(2) Origin: 95NOC641 Condition 3; 00MOD063 Condition 2; 05NOC420, Condition 2 and 3; 08NOC622 Condition 4; §60.7(f)
RK16. Records Required by 40 CFR Part 63, Subpart ZZZZ	Recordkeeping Conditions Authority: WAC 173-401-615(b)(1) Origin: §63.4(a)(2); §63.10(b)(1); §63.6595; §63.6625(i); §63.6655(a)(2),(4)&(5); §63.6655(e)&(f); §63.6660
<b>Reporting Conditions</b>	
R1. Certification of Reports.	Reporting Conditions Authority: WAC 173-401-630(1) Origin: WAC 173-410-630(1)
R2. Annual Compliance Certification.	Reporting Authority: WAC 173-401-630(5) Origin: WAC 173-401-630(5)
R3. Confidential Information	Reporting Authority: WAC 173-401-630(1) Origin: <i>Local Only</i> : ORCAA 1.6

<b>CONDITION</b>	<b>REGULATORY BASIS</b>
R4. Semi-annual Monitoring Reports.	Reporting Authority: WAC 173-401-615(3)(a) Origin: WAC 173-401-615(3)(a)
R5. Reporting Deviations From Permit Conditions.	Reporting Authority: WAC 173-401-615(3)(b) Origin: WAC 173-400-107(3); WAC 173-401-645
R6. Notification of Control Equipment Malfunction	Reporting Authority: WAC 173-401-615(3) Origin: WAC 173-401-615(3)
R7. Notification of Complaint Received	Reporting Authority: WAC 173-401-615(2) Origin: WAC 173-401-615(2)
R8. Annual Inventory Report.	Reporting Authority: WAC 173-401-630(1) Origin: ORCAA 8.11; WAC 173-400-105(1)
R9. Testing Notification and Test Rescheduling	Reporting Authority: WAC 173-401-630(1) Origin: WAC 173-401-630(1); WAC 173-400-105(4); 02NOC234 Condition 11; §60.493(a)
R10. Source Test Reports.	Reporting Authority: WAC 173-401-630(1) Origin: WAC 173-401-630(1)
R11. State Greenhouse Gas (GHG) Reporting	Reporting Conditions Authority: WAC 173-401-615 Origin: <i>State Only</i> : Chapter 173-441 WAC
R12. Quarterly Monitoring Report.	Reporting Authority: WAC 173-401-630(1) Origin: 40 CFR Part 60.495(b)
R13. Emission Level Notification.	Reporting Authority: WAC 173-401-630(1) Origin: 05NOC420 Condition 4
R14. Subpart ZZZZ Management Practice Reporting.	Reporting Authority: WAC 173-401-630(1) Origin: § 63.6595; §63.6603 Table 2d
<b>Reporting Conditions</b>	
S1. Permit Shield.	Permit Shield Authority: WAC 173-401-640(1) Origin: WAC 173-401-640(1)
S2. Inapplicable or Exempt Requirements.	Permit Shield Authority: WAC 173-401-640 Origin: WAC 173-401-640

CONDITION	REGULATORY BASIS
S3. Exclusions	Permit Shield Authority: WAC 173-401-640 Origin: WAC 173-401-640



**ATTACHMENT 1:  
FIGURES**

Figure 1 – Rooftop Stack Locations

