Notice of Construction (NOC) Worksheet

PUGET SOUND
Clean Air Agency

Source: Industrial Container Services - WA, LLC	**NOC Number:** 12196
Installation Address: 7152 1st Ave S | Seattle, WA 98108	**Registration Number:** 11683
Contact Name: Brian Perez	**Contact Email:** brian.perez@mauserpackaging.com
Applied Date: 11/02/2021	**Contact Phone:** (313) 545-4683
Engineer: Carl Slimp	**Inspector:** Rain Yates

A. DESCRIPTION

For the Order of Approval:

ICS-WA is planning to replace some of the existing equipment with new or refurbished units as follows:

- Replace the existing drum furnace controlled by an afterburner with a refurbished drum furnace with an afterburner from another ICS facility. (Manufactured by North American, Models 4425-5 Nature Gas Burner and 4425-7 Nature Gas Burner
- Replace the existing shot blaster controlled by a baghouse with a new shot blaster with a baghouse. (Baghouse Make FARR APC Model Hemipleat Filter GS8)
- Replace the existing spray guns in the paint booth with seventeen (17) new guns. Spray booth enclosure will also be replaced with a 866 cubic feet Kremlin Airmix 290. Emissions from the booth will ducted to the existing RTO for control.
- Replace the drum curing oven with a new drum curing oven (manufactured by Epcon) which will be controlled by the existing RTO.

Additional Information (if needed):

Facility
Proposed Equipment/Activities

ICS is running a drum reclamation operation that consists of open-head drum reconditioning. Used drums are obtained from several different sources. Currently the facility is allowed to process five (5) fruit drums and one (I) industrial drum per minute. Industrial drums that have contained regulated materials are accompanied by an "Empty Drum" Certificate, that certify that the drums are RCRA empty, drip dry. The facility will continue to process up to six (6) drums per minute. ICS is requesting that the limitation on the type of drums that are being processed is changed from 1 in 6 drums processed being industrial drums (the rest being sourced from fruit and food sources), to 60 industrial source drums per hour.

Drum Cutters and Beaders

Open head drums accepted for reconditioning are being unloaded from the delivery trucks directly on the cutting porch. The cutting porch is attached to the processing facility and has one common wall with it, but is open (no walls) on other sides. On the cutting porch workers use pneumatic tools to remove the drum ring from open-head drums that secures the lid to the drum. Tight head drums are converted to open head drums by cutting off the tight head in the drum cutter. The interior of the drum is inspected to ensure it meets the requirements for acceptance.

After cutting some drums may be processed through the beader. The beader is a mechanical device that rolls the top edge of the cut drum to a shape that will accept a gasket and open head drum lid and lock ring.

After the inspection the drums are placed on a conveyor to the drum furnace.

Drum Burnout Furnace with Afterburner
Drums are loaded on the drum furnace conveyor and lids are removed. Drum lids will no longer be recycled at this facility and will be scrapped. Drums are conveyed through the high temperature burnout furnace to remove both interior coatings and exterior paints and markings from the outside the drums. Hot gases from the furnace are ducted into a natural gas fired direct flame oxidizer that operates at a minimum of 1650°F. Natural gas is the only fuel burned by the furnace and the afterburner. The afterburner exhaust gases are discharged to the atmosphere.
Emissions from the burnout furnace are associated with natural gas combustion by furnace burners and emissions from burning drum residual materials, drum paint and coatings.
ICS - WA is planning to replace the existing drum furnace with afterburner with a refurbished drum furnace with an afterburner from another ICS facility.

Shot Blaster with Bag house
ICS - WA will replace the existing shot blaster with a new shot blaster controlled by a new baghouse. Thermally cleaned drums are processed in the dry abrasive blaster to remove any remaining interior and exterior residue and markings prior to surface coating.

Drums Shaping, Inspection, and Leak Testing
Cleaned drums undergo physical/mechanical operations designed to reshape the drums to meet desired specifications. These operations include body expander, chime straightener, cover straighteners, body roller, leak tester, and an embossing press to place the required identification markings on the drum. There are no emissions generated by these operations.

Surface Coating
ICS-WA, LLC currently operates one enclosed open-head drum spray booth, one manual lid spray booth, and one paint kitchen. The lid spray booth will be removed because lids will no longer be recycled at this facility.
New spray nozzles, replacing exiting nozzles, and the booth itself will be replaced. 17 new nozzles, 9 for drum exterior coating and 8 for drum interior lining, will be installed. The proposed change will not increase the drum coating rate and the facility will continue to process up to 6 drums per minute. The VOC emissions from the coating operations will be captured and routed to a regenerative thermal oxidizer (RTO) for control of VOC.

Drum Curing Oven
After painting, the drums enter the enclosed flash off tunnel and the natural gas fired curing oven which allows the paint to be "fast cured". The flash off tunnel will be enclosed and exhausted to the RTO for control. The exhaust stream from the curing oven will be also routed to the RTO for control.

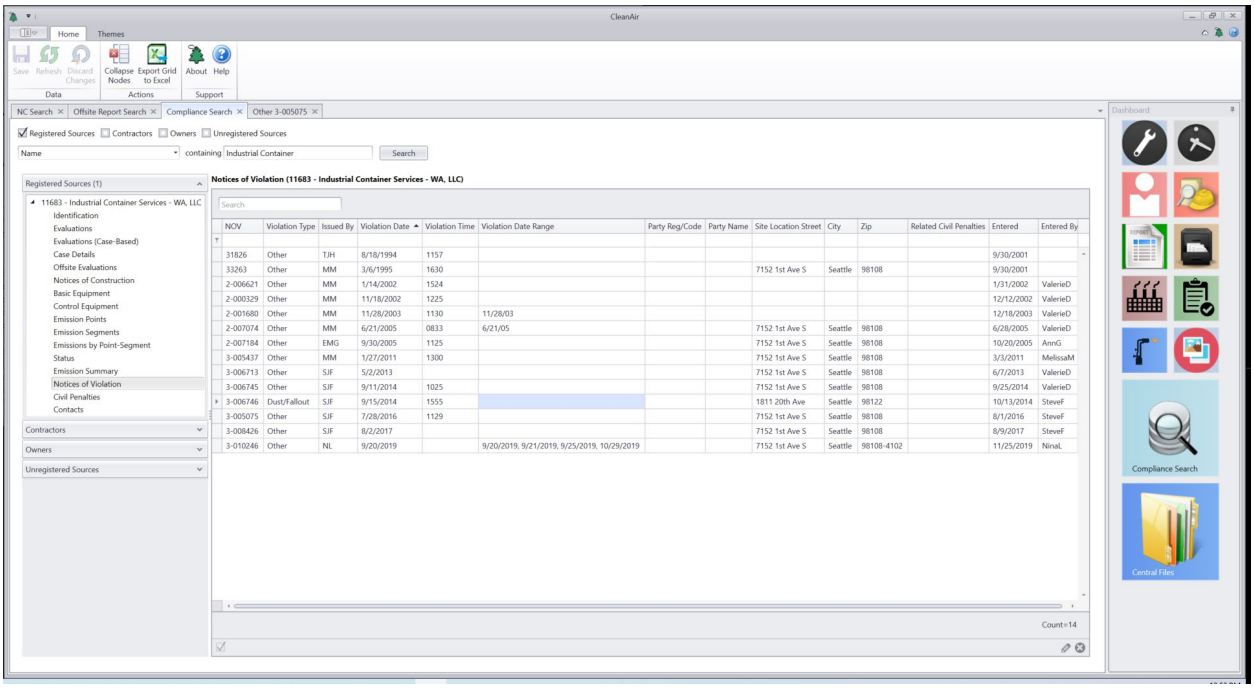
Ring Dip
The drum lock rings are separately coated in the ring dipping operation. Drum rings are placed on a rack and are dipped into the ring coating tank. The rings are then left to drip and dry on the drying rack.

Paint Kitchen
The paint kitchen is a room adjacent to the coating line where drums and containers of coatings and solvent are stored. The paint kitchen will have five pumping stations for coatings and flushing solvent drums. Paint and flush solvent are pumped to the paint booths through dedicated lines.
Work practices, such as keeping containers covered at all times when not adding or removing material results in nominal emissions. Negligible emissions are expected from this operation.

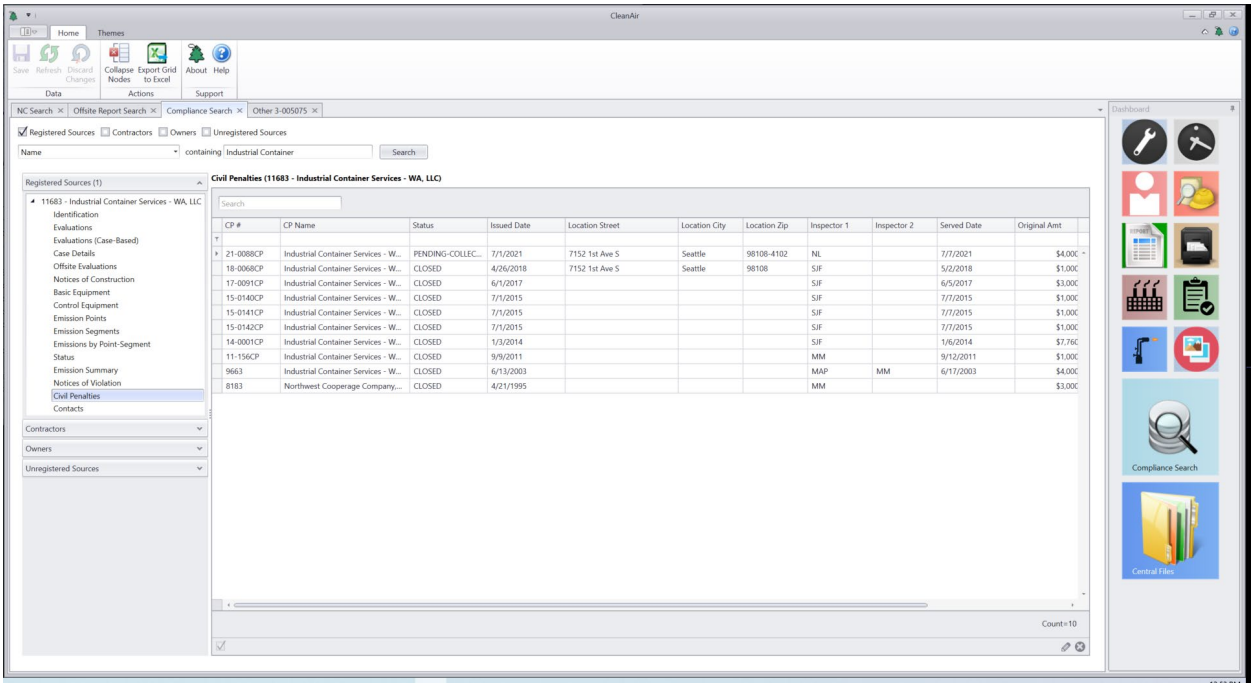
Regenerative Thermal Oxidizer
ICS-WA will continue to use the existing RTO to control VOC emissions from the paint booth, the flash-off tunnel and the curing oven. The RTO is equipped with a natural gas fired burner with a maximum heat input rate of 1.4 mmBtu per hour and maximum air flow rate of 5,150 SCFM.

NOV history
The NOV history is below. The most recent was in 2019 and the alleged facts are as follows:

NOV 3010246- On 10/29/2019 I observed three filters missing from the drum spray booth filter bank.
On 10/29/2019 Industrial Container Services - WA, LLC caused or allowed the failure to employ properly seated paint arresters in the drum spray booth.
On 10/29/2019 Industrial Container Services - WA, LLC caused or allowed the failure to maintain the drum spray booth in good working order.
Industrial Container Services - WA, LLC caused or allowed the failure to continuously record the RTO combustion chamber temperature while the paint curing oven operated on 9/20/2019, 9/21/2019, and 9/25/2019.



Civil penalties paid are as follows. Only the NOV listed above is still pending.



Permit History

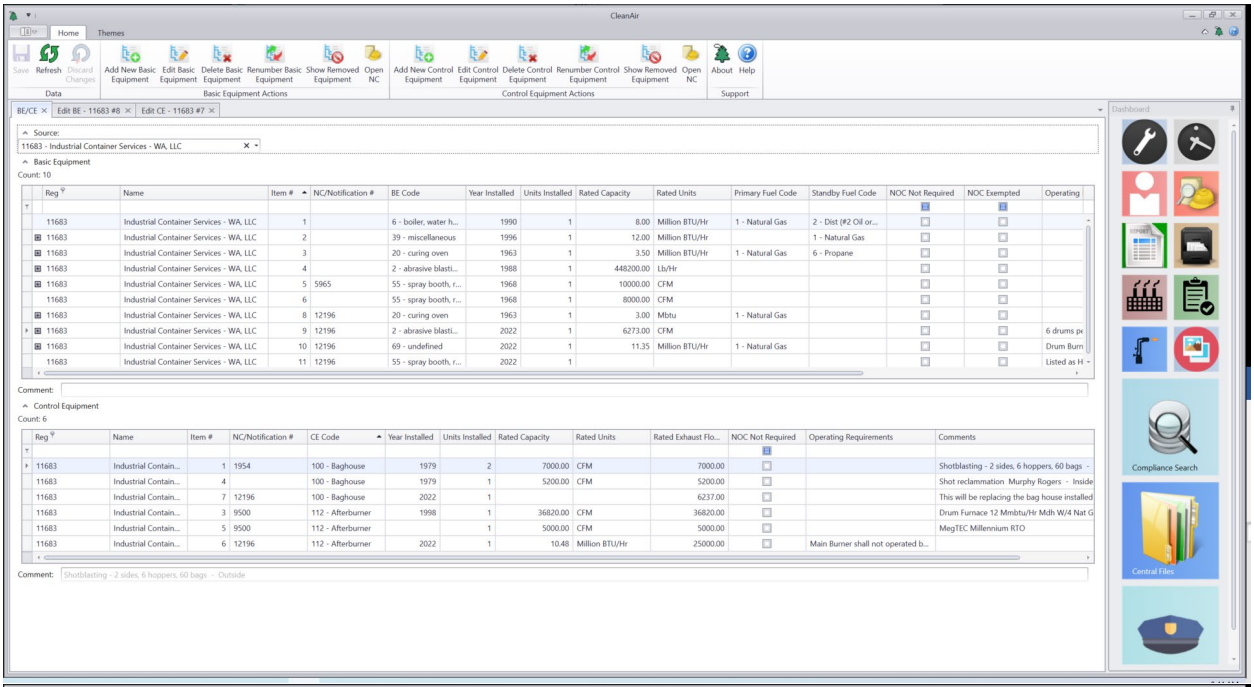
This facility is currently permitted under NOC 9500 and 5965.

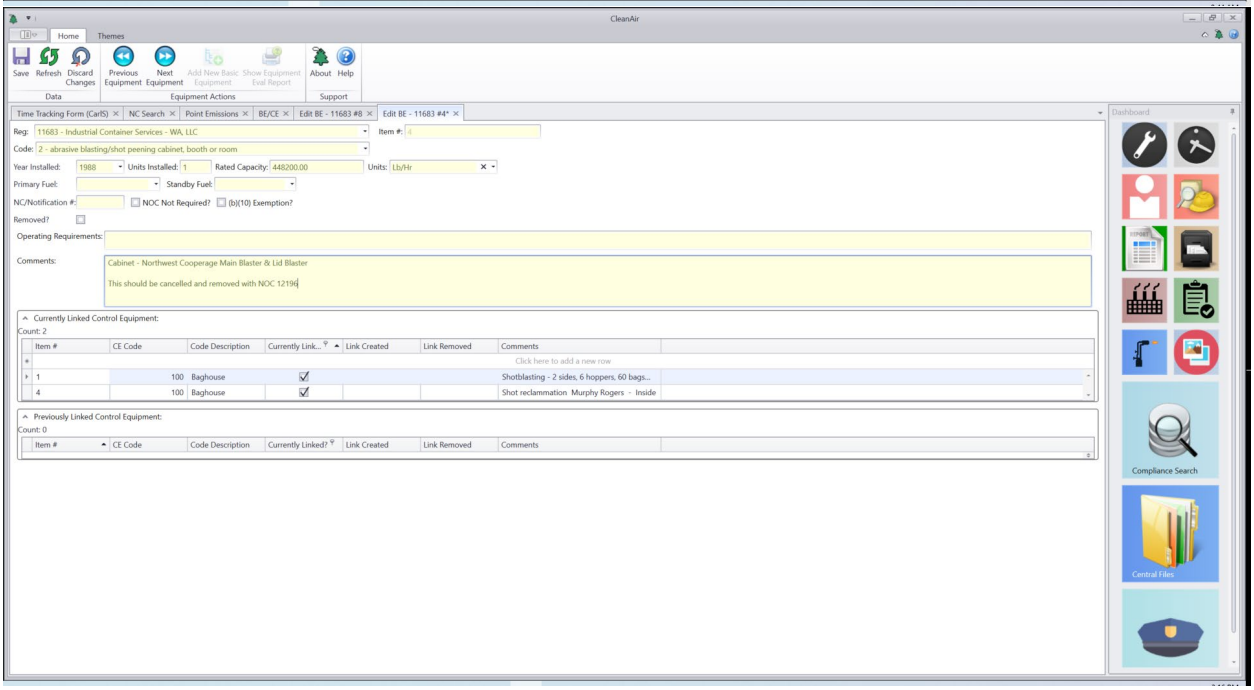
Order 5965 is an order that limits ICS-WA of emitting less than 99 tons of VOC compounds during any 12 consecutive months. They will also be limited to 9 tons during any consecutive 12 months of methyl ethyl ketone, xylene and toluene each, as well as a combined 24 tons. The limit added to the permit would be in addition to and not in conflict of these limits.

NOC 9500 is the order of approval for the One MegTEC Millennium 060-95 Regenerative Thermal Oxidizer for the existing Paint Curing Oven. This approval order will cancel and replace NOC 9500.

9500.pdf 5965.pdf

B. DATABASE INFORMATION


CleanAir
Home
Themes
Save
Refresh
Discard Changes
Add New Basic Equipment
Edit Basic Equipment
Delete Basic Equipment
Renumber Basic Equipment
Show Removed Equipment
Open NC
Add New Control Equipment
Edit Control Equipment
Delete Control Equipment
Renumber Control Equipment
Show Removed Equipment
Open NC
About
Help
Data
Basic Equipment Actions
Control Equipment Actions
Support
BE/CE
Edit BE - 11683 #8
Edit CE - 11683 #7
Source:
11683 - Industrial Container Services - WA, LLC
Basic Equipment
Count: 10
Reg
Name
Item #
NC/Notification #
BE Code
Year Installed
Units Installed
Rated Capacity
Rated Units
Primary Fuel Code
Standby Fuel Code
NOC Not Required
NOC Exempted
Operating
11683 Industrial Container Services - WA, LLC 1 6 - boiler, water h... 1990 1 8.00 Million BTU/Hr 1 - Natural Gas 2 - Dist (#2 Oil or...
11683 Industrial Container Services - WA, LLC 2 39 - miscellaneous 1996 1 12.00 Million BTU/Hr 1 - Natural Gas
11683 Industrial Container Services - WA, LLC 3 20 - curing oven 1963 1 3.50 Million BTU/Hr 1 - Natural Gas 6 - Propane
11683 Industrial Container Services - WA, LLC 4 2 - abrasive blasti... 1988 1 448200.00 Lb/Hr
11683 Industrial Container Services - WA, LLC 5 5965 55 - spray booth, r... 1968 1 10000.00 CFM
11683 Industrial Container Services - WA, LLC 6 55 - spray booth, r... 1968 1 8000.00 CFM
11683 Industrial Container Services - WA, LLC 8 12196 20 - curing oven 1963 1 3.00 Mbtu 1 - Natural Gas
11683 Industrial Container Services - WA, LLC 9 12196 2 - abrasive blasti... 2022 1 6273.00 CFM 6 drums pe
11683 Industrial Container Services - WA, LLC 10 12196 69 - undefined 2022 1 11.35 Million BTU/Hr 1 - Natural Gas Drum Burn
11683 Industrial Container Services - WA, LLC 11 12196 55 - spray booth, r... 2022 1 Listed as H
Comment:
Control Equipment
Count: 6
Reg
Name
Item #
NC/Notification #
CE Code
Year Installed
Units Installed
Rated Capacity
Rated Units
Rated Exhaust Flo...
NOC Not Required
Operating Requirements
Comments
11683 Industrial Contain... 1 1954 100 - Baghouse 1979 2 7000.00 CFM 7000.00 Shotblasting - 2 sides, 6 hoppers, 60 bags -
11683 Industrial Contain... 4 100 - Baghouse 1979 1 5200.00 CFM 5200.00 Shot reclammation Murphy Rogers - Inside
11683 Industrial Contain... 7 12196 100 - Baghouse 2022 1 6237.00 This will be replacing the bag house installed
11683 Industrial Contain... 3 9500 112 - Afterburner 1998 1 36820.00 CFM 36820.00 Drum Furnace 12 Mmbtu/Hr Mdh W/4 Nat G
11683 Industrial Contain... 5 9500 112 - Afterburner 1 5000.00 CFM 5000.00 MegTEC Millennium RTO
11683 Industrial Contain... 6 12196 112 - Afterburner 2022 1 10.48 Million BTU/Hr 25000.00 Main Burner shall not operated b...
Comment: Shotblasting - 2 sides, 6 hoppers, 60 bags - Outside
Dashboard
Compliance Search
Central Files


CleanAir
Home
Themes
Save
Refresh
Discard Changes
Previous Equipment
Next Equipment
Add New Basic Equipment
Show Equipment Eval Report
About
Help
Data
Equipment Actions
Support
Time Tracking Form (CarlS)
NC Search
Point Emissions
BE/CE
Edit BE - 11683 #8
Edit BE - 11683 #4*
Reg: 11683 - Industrial Container Services - WA, LLC
Item #:
Code: 2 - abrasive blasting/shot peening cabinet, booth or room
Year Installed: 1988
Units Installed: 1
Rated Capacity: 448200.00
Units: Lb/Hr
Primary Fuel:
Standby Fuel:
NC/Notification #:
NOC Not Required?
(b)(10) Exemption?
Removed?
Operating Requirements:
Comments:
Cabinet - Northwest Cooperage Main Blaster & Lid Blaster
This should be cancelled and removed with NOC 12196
Currently Linked Control Equipment:
Count: 2
Item #
CE Code
Code Description
Currently Link...
Link Created
Link Removed
Comments
Click here to add a new row
1 100 Baghouse Shotblasting - 2 sides, 6 hoppers, 60 bags...
4 100 Baghouse Shot reclammation Murphy Rogers - Inside
Previously Linked Control Equipment:
Count: 0
Item #
CE Code
Code Description
Currently Linked?
Link Created
Link Removed
Comments
Dashboard
Compliance Search
Central Files

New NSPS due to this NOCOA?	**No**	**Applicable NSPS:**	**Delegated?**
New NESHAP due to this NOCOA?	**No**	**Applicable NESHAP: MMMM possibly applicable due to not being a major source**	**Delegated?**
New Synthetic Minor due to this NOCOA?	**No**		

This source has taken self imposed limits to be a synthetic minor. Otherwise it has the potential be subject to 40 CFR 63 Subpart MMMM.

C. NOC FEES AND ANNUAL REGISTRATION FEES

NOC Fees:

Fees have been assessed in accordance with the fee schedule in Regulation I, Section 6.04. All fees must be paid prior to issuance of the final Order of Approval.

Fee Description	**Cost**	**Amount Received (Date)**
Filing Fee	$ 1,550	
Equipment (5 pieces)	$ 3,250	
SEPA (DNS)	$ 900	
Review of Engineering Source Testing submitted in support of application	$ 1,000	
Public Notice	$ 750	
First Tier Review of Toxic Air Contaminants	$ 800	
Document Review to Determine the Notice of Construction Permitting History of an Emissions Unit	$650	
Filing received		$ 1,550 (11/2/2021)
Additional fee received		$ 7,350
Total	**$8,900**	

Registration Fees:
Registration fees are assessed to the facility on an annual basis. Fees are assessed in accordance with Regulation I, Section 5.07.

Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, WA 98101-3317
Tax ID: 91-0823558
206.689.4072

Invoice for Year 2021 Registration Fees

Bill To:
Industrial Container Services - WA, LLC **7152 1st Ave S** **Seattle, WA 98108** **Attention: Accounts Payable**

Invoice Date:	Invoice #:
November 20, 2020	20210039
Due Date:	**Terms:**
January 04, 2021	Net 45 Days
Facility ID (Registration #):	
11683	

Site Address: ***Industrial Container Services - WA, LLC***
7152 1st Ave S, Seattle, WA 98108

The annual registration fee is required by Washington State law and Puget Sound Clean Air Agency's Regulation I.

Facility Fees and Applicable Regulations			Charges
Base Fee for Registered Sources. Reg I, 5.07(c)			$ 1,150.00
Reg I, 5.03(a)(3) - Facilities with annual emissions that meet or exceed thresholds			
Reg I, 5.03(a)(4)(D) - Facilities with spray coating operations			
Reg I, 5.03(a)(5) - Facilities with gas or odor control equipment (>= 200 cfm)			
Reg I, 5.03(a)(6) - Facilities with particulate control equipment (>= 2,000 cfm)			
Additional Fees:			
Reg I, 5.07(c)(2) - Facilities with annual emissions that meet or exceed thresholds			$ 2,300.00
			$ 3,450.00
Emission Surcharges - Reg I, 7.07(b)(2)	**Tons in 2019**	**Per Ton**	
HAP (Hazardous Air Pollutants)	5	$ 60	$ 300.00
VOC (Volatile Organic Compounds)	44	$ 60	$ 2,640.00
			$ 2,940.00
Fee Totals			
TOTAL REGISTRATION FEE			$ 6,390.00
The Total Registration Fee is due by January 04, 2021. If unpaid after January 04, 2021, the facility may be subject to enforcement action with civil penalties (Reg I, 5.07(b)).			

Pay online and confirm payment: www.pscleanair.gov/annualfee
This copy is for your records. If paying by check, please mail the yellow copy with your payment.
Your canceled check is your receipt.

11/06/2020

D. STATE ENVIRONMENTAL POLICY ACT (SEPA) REVIEW

State Environmental Policy Act (SEPA) review was conducted in accordance with Regulation I, Article 2. The SEPA review is undertaken to identify and help government decision-makers, applicants, and the public to understand how a project will affect the environment. A review under SEPA is required for projects that are not categorically exempt in WAC 197-11-800 through WAC 197-11-890. A new source review action which requires a NOC application submittal to the Agency is not categorically exempt.

PSCAA is the SEPA lead agency for this project. The applicant submitted a completed Environmental checklist that is included below. This project has also received past DNS evaluations and approval letters for each piece of equipment being replaced.


5965-dns.pdf


2021-11-24 ICS-WA - 50-150 SEPA Enviro


12196 ICS Map.pdf


Comments on Proposed Order of Ap


RE_ Industrial Container Services NC


SMC Chapter 25.05.800 SEPA Categ


ICS PCB 61(a) Response Letter_2_F

The City of Seattle was consulted for comments on 11/29/2021 and replied that The City of Seattle does not anticipate issuing any permits or licenses for the subject project that would require a SEPA threshold determination, nor do we have any comments or concerns for your consideration.

Based on the original proposed action and the information in the checklist, a DNS was originally proposed.

During the comment period, the Washington Department of Ecology submitted comments concerned that the city or WDOE may have concerns about permitting that needed to be included. This was over concerns on soil contamination as well as possibly requiring a new foundation for the control equipment.

It was learned that foundation would be replaced, disturbing contaminated soil. On 4/5/2023, ICS received Approval of Self-Implementing On-Site Cleanup and Disposal of Polychlorinated Biphenyl (PCB) Remediation Waste From EPA Region 10. This approval letter with requirements are above. ICS will be removing 125-130 cubic yards of soil, and shall be removing PCB until the levels are less than <10 ppm. This was provided to the agency with an updated environmental checklist.

A new checklist has been submitted, with the previously mentioned EPA notification. With these two documents, and the previous determination, it has been determined that this project will not: adversely affect environmentally sensitive or special areas, or endangered or threatened species; conflict with local, state, or federal laws or requirements for the protection of the environment, or establish a precedent for future actions with significant effects. This proposal is not likely to have a probable significant adverse environmental impact, and I recommend the issuance of a Determination of Non-Significance. Consequently, the Agency will withdraw the DNS issued on June 1, 2023 and issue a new DNS, subject to public comment.

E. TRIBAL CONSULTATION

On November 21, 2019, the Agency's Interim Tribal Consultation Policy was adopted by the Board. Criteria requiring tribal consultation are listed in Section II.A of the policy and include establishment of a new air operating permit source, establishment of a new emission reporting source, modification of an existing emission reporting source to increase production capacity, or establishment or modification of certain equipment or activities. In addition, if the Agency receives an NOC application that does not meet the criteria in Section II.A but may represent similar types and quantities of emissions, the Agency has the discretion to provide additional consultation opportunities.

The Agency identified that this NOC application meets one of the criteria in the Agency's Interim Tribal Consultation Policy, adopted by the Board on November 21, 2019. This NOC modifies an existing

emission reporting source subject to Agency Regulation I, Section 5.03(a)(3) to increase the production capacity of that source.

This NOC will modify an existing emission reporting source subject to Regulation I, Section 5.03(a)(3) to increase the production capacity of that source.
Section 5.03(a)(3) reads:
(3) Sources with annual emissions:
(A) Greater than or equal to 2.50 tons of any single hazardous air pollutant (HAP);
(B) Greater than or equal to 6.25 tons of total hazardous air pollutants (HAP); or
(C) Greater than or equal to 25.0 tons of carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM2.5 or PM10), sulfur oxides (SOx), or volatile organic compounds (VOC);

In accordance with the policy, the Agency notified each Tribe within the Agency's jurisdiction on March 17, 2022 of the intent to hold a consultation.

No requests or comments were received by the agency.

On June 13, 2022, the Agency notified each tribe that the Agency would be proceeding with the final steps to issue the conditional approval of this Notice of Construction application.

F. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW

Best Available Control Technology (BACT)

New stationary 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 70.94 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."

An emissions standard or emissions limitation means "a requirement established under the Federal Clean Air Act or Chapter 70.94 RCW which limits the quantity, rate, or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment, work practice, or operational standard adopted under the Federal Clean Air Act or Chapter 70.94 RCW."

Best Available Control Technology for Toxics (tBACT)

New or modified sources are required to use tBACT for emissions control for TAP. Best available control technology for toxics (tBACT) is defined in WAC 173-460-020 as, "the term defined in WAC 173-400-030, as applied to TAP."

BACT and tBACT emissions will be addressed by the same control equipment. Each process will have its own BACT/tBACT and will be looked at separately.

Drum Furnace with After Burner
Similar Permits

Area/Permit/Company	Pollutants	BACT determinations
SCAQMD 134018 ICS Drum Furnace with Afterburner	NOx CO PM	• Low NOx burners implemented • Not more than 122,000 cubic feet burned per day of natural gas • 400 ppmv of CO ○ 0.1 gr/scf PM • 60 ppmv of NOx • Afterburner shall be maintained at a minimum 1,700 F • Shall be tested once every five years
PSCAA NOC 7047 ICS – Temporary Order of approval for existing Drum Furnace installed 1964	PM	• Northwest Cooperage shall not exceed 0.05 gr/dscf corrected to 7% oxygen from the drum reclamation furnace afterburner. • Northwest Cooperage shall not feed drums to the drum reclamation furnace afterburner unless the temperature of the afterburner is 1,600 degrees F or more. • Northwest Cooperage shall immediately cease processing any drums in the drum reclamation furnace that cause visible emissions other than uncombined water.
PSCAA/ ICS NOC 9500	NOX PM	• All drums processed in the reclamation furnace shall be 'drip dry' and shall contain no more than 1 inch of residue. • No drums shall be processed in the reclamation furnace unless the reclamation furnace afterburner chamber temperature is at least 1700 degrees F
PSCAA ICS 7131 NOC	PM HCl Dioxins	• Every 3 years the after burner shall be tested using the following limits and methods: • PM with PSCAA method 5 • HCl testing by EPA method 26 • Air toxic testing by TO-14 • Metals by EPA method 29 • 7.5 ng/dscm by EPA method 23 These tests were used to determine the following:

		(a) The maximum numbers of drums per hour processed; (b) The maximum quantities and characteristics of drum coating paints processed per hour; and (c) The maximum quantities and characteristics of drum residue materials processed per hour.

Analysis

Based on other permits, the furnace should not be allowed to take drums while below a manufactured specific temperature, 1700F. Low NOx burners should be used. Opacity and PM emissions should follow PSCAA rules of 0.2 gr/dscf. Testing will also be required while burning industrial containers to verify rates.

Based on California rules, 60 ppm of NOx and 400 ppm of CO could potentially be achievable. Looking at the source test, NOx was ~81.2 ppm while CO was 0.4 ppm. BACT should include a NOx limit. As 81 ppm was used for the estimated emission rates, 85 ppm should be achievable without sacrificing CO emissions. A 400 ppm CO emission rate at 7% O2 should also be achievable and implemented. Therefore, the Agency has determined BACT to be 85ppm for NOx, and 400 ppm for CO.

Shot Blaster controlled by Baghouse

Similar Permits

Area/Permit/Company	Pollutants	BACT determinations
SCAQMD 134018 ICS r	PM	• Zero percent opacity • Dust collected shall be discharged into closed containers. • A pressure gauge shall be used across the baghouse
PSCAA NOC 7987 Genie Industries	PM	• No visible emissions from baghouse • Pressure gauge used and checked every shift
PSCAA 7964 North Star Casteel	PM	• There shall be no visible emissions or fallout from the baghouse. • North Star Casteel shall install and maintain a gauge to measure the pressure drop across the baghouse exhaust filters. Within 90 days after beginning operations, the acceptable range for the gauge shall be clearly marked on or nearby the gauge. • Once during each week the baghouse is used, North Star Casteel shall perform inspections that shall include a check of the exhaust for visible emissions and fallout, and a check of the pressure drop across the filters.

		• If visible emissions, fallout, or abnormal pressure drop are observed, North Star Casteel shall both investigate the cause and initiate repairs or shut down the processes vented to the baghouse within 24 hours of the observation. The result shall be recorded in a designated Operation & Maintenance (O&M) log. • Records of all weekly inspections and corrective actions shall be maintained for at least two years and made available to Puget Sound Clean Air Agency personnel upon request.

Analysis and Recommendations:
No visible emissions should be making it through the baghouse. A pressure gauge shall be checked every shift to ensure proper operation. Dust shall be stored in closed containers.

Spray Booth controlled by RTO

Similar Permits

Area/Permit/Company	Pollutants	BACT determinations
PSCAA NOC 9500 ICS	VOC	The monthly (and 12-month rolling total) emissions from the paint spray booths shall be estimated based on the results of a source test which shall be conducted within 90 days of the installation of the RTO in accordance with a test plan approved by the Agency. The RTO combustion chamber temperature shall be at least 1600 degrees F (1-hour average) or the temperature recorded during the compliance test (whichever is lower) at all times when the paint curing oven is in operation. There shall be no visible emissions from the RTO.
12138 Pacific Crest Industries	VOC	• The owner/operator shall install and maintain manometers to measure the pressure drop across the exhaust filters for the spray booths. Acceptable ranges for the gauges shall be clearly marked on or nearby the gauges. • The owner/operator spray booth operation shall use high volume, low pressure (HVLP), Air Assisted Airless, LVLP, electrostatic or spray equipment approved by South Coast Air Quality Management District for their application and capable of achieving

		equivalent or better transfer efficiency than the HVLP spray guns • RTO shall have 99% destruction efficiency or be no greater than 20 ppm at 20.9% O2 • The owner or operator shall calculate and maintain a record of VOC emissions from the equipment authorized by this Order of Approval and prepare monthly records that demonstrate that emissions do not exceed the 12-monthly rolling limit in condition 16. Emission calculation records for each month must be completed by the 30th day of the following month. Records shall include the following: a. Monthly total VOC emissions and the monthly total VOC emission rate (lbs/month), and b. Rolling total VOC emissions over the previous consecutive 12-month period. • Organic solvents used for cleanup of equipment as well as solvent soaked rags and paper must be collected and returned to closed containers after every use. • Containers used for the storage and disposal of spray applied materials shall be kept closed except when materials are actively transferred into or out of the containers. If containers are used to collect excess materials during spray line operation, the containers must remain covered to the fullest extent possible. • VOC testing shall be conducted in accordance with EPA Test Method 25 or 25A. Testing to quantify exempt compounds shall be conducted in accordance with EPA Test Method 18. If the source chooses to quantify exempt compounds their concentrations must be measured using Method 18, and Method 25A analyzer response factors must be developed for them at the measured concentrations and stack gas conditions. The Method 25A analyzer signal must then be corrected by subtracting the exempt

		compound contributions. If Method 25 is used, the concentration of exempt VOC expressed as a carbon must be subtracted from the total Method 25 measured concentration of VOC as carbon.
NC 11204	29900	• Shall not use coatings that contain compounds of chromium, cadmium, lead, manganese or nickel as determined by the SDS or other documentation provided by the manufacturer or supplier

Analysis and Recommendations: RTO shall have a minimum temperature of 1600F. RTO should have a destruction efficiency of 99% or no more than 20ppm VOC @ 20.9% O_2, and will be verified by method 25A. Paints used by ICS shall not contain Nickel, Cadmium, Chromium or Lead.

Drum curing oven controlled by existing RTO

Similar Permits

Area/Permit/Company	Pollutants	BACT determinations
SCAQMD 134018 ICS	VOC	• Use of PTE's • Filter material at least 2" thick • Gauged used for static pressure across filter media • VOC content shall not exceed 2.83 lbs/gallon • RTO shall be maintained at a minimum of 1,400F
PSCAA NOC 9500 ICS	VOC	The Regenerative Thermal Oxidizer (RTO) shall have a destruction efficiency of at least 98% or an outlet concentration of no more than 40 ppm, as determined by EPA Method 25A. . The RTO combustion chamber temperature shall be continuously monitored and recorded whenever the paint curing oven is in operation, and such records shall be retained for at least 2 years for inspection by Agency staff. The RTO combustion chamber temperature shall be at least 1600 degrees F (1-hour average) or the temperature recorded during the compliance test (whichever is lower) at all times when the paint curing oven is in operation. No visible emissions
PSCAA NOC 5965 ICS	Methyl Ethyl Ketone, Xylene, Toluene	Monthly records shall be kept
PSCAA NOC 8774 Jen-Weld	VOC	Spray guns with 65% transfer efficiency

	PM CO	No Opacity .01 gr/dscf from RTO measured with PSCAA 5 Limit of 3.25 lb/hr CO emissions Limit of 1.8 lb/hr of NOx emissions Minimum temperature of 1400F Surface coatings shall only occur in a PTE based on 40 CFR 51, Appendix M, Method 204

Analysis and Recommendations: There should be an opacity limit on the RTO. The oven should be ducted to an RTO that will a minimum operating temperature of 1600F, with an interlock system so that product cannot be processed below this temperature. The Drum Curing Oven shall meet the requirements of a PTE based on 40 CFR 51, Appendix M, Method 204 to ensure all material goes through the RTO. The requirements for the RTO from PSCAA 9500 should also be carried through, as these are all still applicable.

G. EMISSION ESTIMATES

Proposed Project Emissions

Actual Emissions

ICS provided emission estimates for each unit, assuming 12 hours a day of operation, 360 drums/hr to a total of 780,000 drums/year. This analysis will look at the parts individually and then sum them up.

First process looks at what emissions would look like if all drums were from industrial sources. This looks at the SDS of common chemicals from the past year of sources. The one pollutant that could exceed SQER would be 1,2,4-trimethylbenzene from barrels holding 'Solvent 25' from Steelscape. However, it would be extremely unlikely for this many barrels to come from one source. A 2000 barrels per day from Steelscape would also keep the 1,2,4-trimethylbenzene under SQER. Because there will be a limit of 60 industrial barrels per hour, they should never exceed 1,440 barrels.

Table 1. Emissions from VOC containng Drums

Suppler	SDS	Chemical Content	CAS	VOC YES/NO	HAPs YES/NO	TAX YES/NO	Emissions of Each Chemical (lb/drum)	Averaging Period	Asil (ug/m3)	SQER (lb/averaging period)	Drums per day*	lb/day
Aquatic Bath	Gel Goat	Styrene	100-42-5	Y	Y	Y	0.003	24-hr	8.70E+02	6.50E+01	4320	1.5E+01
		Methyl Methacrylate	80-62-5	Y	Y	Y	0.002	24-hr	7.00E+02	5.20E+01	4320	8.1E+00
		Solvent naphtha (petroleum)	64742-95-6	N	NA	NA	-					
		Cobalt	136-52-7	N	NA	NA	-	24-hr	1.00E-01	7.40E-03		
North American Composite	ACETONE	Acetone	67-64-1	N	N	NA	-	-	-	-	-	-
	AME™6001 T-25 HT	Dimer/Trimer	800986-5689P	N	NA	NA	-	-	-	-	-	-
		Styrene	100-42-5	Y	Y	Y	0.004	24-hr	8.70E+02	6.50E+01	4320	1.8E+01
		Vinyl Toluene	25013-15-4	Y	N	N	0.001					
	Aropol™Q 67700 T-30	Styrene	100-42-5	Y	Y	Y	0.004	24-hr	8.70E+02	6.50E+01	4320	1.9E+01
	COR50-ZZ-00801	Styrene	100-42-5	Y	Y	Y	0.013	24-hr	8.70E+02	6.50E+01	4320	5.6E+01
	G-828-LSHN	Styrene	100-42-5	Y	Y	Y	0.005	24-hr	8.70E+02	6.50E+01	4320	2.0E+01
		Talc	14807-96-6	N	NA	NA	-	-	-	-	-	-
	PA-196-PHLN	Styrene	100-42-5	Y	Y	Y	0.004	24-hr	8.70E+02	6.50E+01	4320	1.6E+01
		Talc	14807-96-6	N	NA	NA	-	-	-	-	-	-
		Man-made mineral fibers	65997-17-3	N	NA	NA	-	-	-	-	-	-
Steelscape	Isophorone	Isophorone	78-59-1	Y	Y	Y	0.001	24-hr	2.00E+03	1.50E+02	4320	4.5E+00
	MEK	MEK	78-93-3	Y	N	Y	0.014	24-hr	5.00E+03	3.70E+02	4320	6.1E+01
	Solvent 25	Aromatic Petroleum Distillates	64742-95-9	N	N	NA	-	-	-	-	-	-
		1,2,4-trimethylbenzene	95-63-6	Y	N	Y	0.002	24-hr	6.00E+01	4.40E+00	4320	9.1E+00
		Xylene	1330-20-7	Y	Y	Y	0.000	24-hr	2.20E+02	1.60E+01	4320	1.5E+00
		Cumene	98-82-8	Y	Y	Y	0.000	24-hr	4.00E+02	3.00E+01	4320	2.1E+00

Table 2 sums the VOC estimates from the increase of industrial drums.

Table 2. VOC and HAP Emissions from Cutting Porch

Drums Processed:	360 drums/hr
	980,000 drums/year

Suppler	Drums Breakdown (%)	Average VOC Emissoins (lbs/drum)	VOC Emissions (lb/hr)	VOC Emissions (tpy)	HAP Emissions (tpy)
Aquatic Bath & similar	4%	0.0053	0.08	0.10	0.10
North American Composite & similar	13%	0.0052	0.24	0.33	0.32
Steelscape & similar	52%	0.0060	1.13	1.54	0.16
Inorganic Drum Supplers	19%	-	-	-	
Petroleum Drum Suppliers	12%	-	-	-	
Total:	100%		1.45	1.97	0.58

Emission from loading a VFR tank should be calculated using Equation 1:

Equation 1 $$L_{MAX} = \frac{M_V \times P_{VA}}{R \times T} \times FR_M$$ **Equation 1**

- MV (lb/lbmol) is the vapor molecular weight of the VOC
- PVA (psia) is the vapor pressure of the tank contents at the worst case temperature
- FRM (gal/hr) is the maximum filling rate
- R ((Psia × gal)/(lbmol × °R)) is the ideal gas constant (80.273 for the selected units)
- T (Rankine) is the worst case liquid surface temperature. It is TCEQ practice to use either 95°F (554.67°R) or the actual temperature, whichever is higher

Using these units in Equation 1 gives emissions as a lb/hr rate.

Table 3. Emissions from Drum Burnout Furnace

	6	drums/min
Drum Processing Rate	**360**	drums/hour
	780,000	drums/year[(2)]
Safety Factor	**1.1**	

	Emission Factor [(1)]	**Proposed Emissions**			Averaging	SQER	Lb/averaging
Pollutant	**lb/dr**	**lb/hr**	**tpy**	**HAP**	Period		period
Filterable PM	2.277E-02	9.015	9.77	N			
PM10	2.277E-02	9.015	9.77	N			
PM2.5	1.229E-02	4.868	5.27	N			
NOx	1.855E-02	7.345	7.96	N			
SO_2	0.000E+00	0.000	0.00	N			
CO	5.587E-05	0.022	0.02	N			
VOC as TGO	2.793E-05	0.011	0.01	N			
Arsenic	9.134E-07	0.000	0.000	Y	year	4.900E-02	7.125E-01
Beryllium	1.215E-08	0.000	0.000	Y	year	6.800E-02	9.478E-03
Cadmium	3.631E-07	0.000	0.000	Y	year	3.900E-02	2.832E-01
Chromium (Total)	2.927E-05	0.012	0.013	Y	year	6.500E-04	2.283E+01
Lead	3.053E-05	0.012	0.013	Y	year	1.400E+01	2.381E+01
Mercury	8.883E-08	0.000	0.000	Y	24-hr	2.20E-03	8.442E-04
Nickel	4.637E-06	0.002	0.002	Y	year	6.200E-01	3.617E+00
Acetone	2.095E-05	0.008	0.009	N			
Benzene	1.844E-06	0.001	0.001	Y	year	2.100E+01	1.438E+00
Methyl Ethyl Ketone	1.564E-06	0.001	0.001	N	year	3.700E+02	1.220E+00
Ethylbenzene	9.497E-07	0.000	0.000	Y	year	6.500E+01	7.408E-01
Styrene	3.464E-06	0.001	0.001	Y	24-hr	6.500E+01	2.702E+00
Toluene	1.397E-06	0.001	0.001	Y	24-hr	3.700E+02	1.089E+00
Xylene	4.358E-06	0.002	0.002	Y	24-hr	1.600E+01	3.399E+00
Total HAPs		0.031	0.033				

[(1)] Emission rates established in emission testing performed 2019 at ICS-OH, Columbus, OH

[(2)] A maximum of 780,000 drums/year could be processed by the Drum Furnace.

	Averaging period	Asil (ug/m	Model Results
Cadmium	year	0.039	2.39E-04
Lead	year	0.083	2.01E-02
Arsenic	year	0.0003	5.98E-04
Mercury	24-hr	0.03	9.37E-05
Chromium	year	0.000004	5.33E-03

Arsenic, Cadmium, Chromium, Lead and Mercury are all above SQER. RK & Associates, Inc submitted results showing that cadmium and lead would all be below ASIL with arsenic failing. I modeled Mercury and Chromium. Mercury is below ASIL while chromium is not. With these results, the removal of production restrictions established in Notice of Construction 9500 that was requested is being denied.

ICS believes that the majority of the metal emissions is from the barrel contents burned at the Ohio facility where the source test was being conducted. However, no SDS's were provided to substantiate this. With this in mind, this afterburner replacement should essentially be an "as kind" replacement. Natural gas shall be used as the fuel, and the source of industrial barrels will not be changing. In keeping with the NOC 9500 limit, I do not see how the emissions can be increased. An EPA method 29 test should be required if this limit is to be changed through a future NOC application and Order of Approval.

ICS will be subtracting actual emissions to satisfy WAC 173-460-080 (3):
Reduction of TAPs from existing emission units. An applicant may include in an acceptable source impact analysis proposed reductions in actual emissions of a particular TAP from emission units at the source that are not new or modified for the purpose of offsetting emissions of that TAP caused by the new or modified source. The reductions in TAP emissions authorized by this subsection must be included in the approval order as enforceable emission limits and must meet all the requirements of WAC 173-460-071.

They have provided the following past production through the Drum Furnace, with a 2 year maximum in the past five years being 601,890 total barrels.

Drum Throughput 2017-2021.xlsx

Based on the given pollutant per barrel, $2.927*10^{-5}$ lb/dr of chromium, 22 barrels per year can be processed before exceeding the SQER of $6.5*10^{-4}$lb/year of chromium. After subtracting the emissions from the drum furnace being removed, it will be a new limit 601,912 total barrels through the barrel burn out furnace. As this is the only source of chromium expected for this project, this rate should only apply to the drum burnout furnace, and 780,000 drums/year will still apply to the rest of the plant.

Table 4. Emissions from Shot Blaster with Baghouse

Emission Source	Operating Hours (hrs/year)	Exhaust Air Flow Rate cfm	Baghouse Fliter Emission Rate [(1)] (gr/dscf)	$PM/PM_{10}/PM_{2.5}$ Emissions (lb/hr)	$PM/PM_{10}/PM_{2.5}$ Emissions (tpy)
Shot Blaster	3120	**6,273**	**0.005**	0.27	0.42

[(1)] Cartridge Filter emission factor from similar facilities.

Table 5. VOC Emissions from Coating Line (spray booth, flash off tunnel, and curing oven)

Description	Value	Units	Comments
Projected Exterior Coating Usage	5.03	oz/drum	25.5 drums per gallon paint
Projected Interior Lining Usage	4.17	oz/drum	30.7 drums per gallon paint
Safety Factor	1.10		
Drum Throughput	6	drums/min	
Annual Drum Throughput	980,000	drums/yr	
RTO destruction	98%		

Coating	Maximum Material VOC content	Maximum Coating Usage		Uncontrolled VOM Emissions		Controlled VOM Emissions	
	(% wt.)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Exterior Coating Colors: Snuckers blue, Black, Red	46.39%	128.16	174.44	59.45	80.92	1.19	1.62
Interior Lining Colors: Red Liner	36.53%	123.71	168.38	45.19	61.51	0.90	1.23
Cleaning Solvent - acetone	0.00%	18.39	25.03	0.00	0.00	0.00	0.00
Total				**104.64**	**142.43**	**2.09**	**2.85**

Table 6. HAPs Emissions from Coating Line

Coating	Toluene		Phenol		Xylene		MIBK		Ethylbenzene		Total HAPs Emissions (tpy)
	Maximum Content (% wt.)	Controlled Emissions (tpy)	Maximum Content (% wt.)	Controlled Emissions (tpy)	Maximum Content (% wt.)	Controlled Emissions (tpy)	Maximum Content (% wt.)	Controlled Emissions (tpy)	Maximum Content (% wt.)	Controlled Emissions (tpy)	
Exterior Coating Colors: Snuckers blue, Black, Red	1.07%	0.04	0.00%	0.00	11.24%	0.39	0.00%	0.00	0.51%	0.02	0.45
Interior Lining Colors: Red Liner	0.01%	0.000	0.05%	0.002	0.25%	0.008	0.02%	0.001	5.00%	0.168	0.18
Total		0.038		0.00		0.40		0.001		0.19	0.63

SQER Analysis compared to WAC 173-460-150

	Toluene	Penol	Xylene	MIBK	Ethyl Benzene
Averaging period	24-hr	24-hr	24-hr	24-hr	year
SQER (lbs/averaging period)	370	15	16	220	65
Rate/averaging period	0.206397	0.0084882	2.1952493	0.0036905	0.63

Table 7. PM Emissions from Spray Booth

Coatings	Maximum Solid Content	Maximum Coating Usage		Transfer Efficiency	Filter Control Efficiency	PM/PM10/PM2.5 Emissions	
	(% wt.)	(lb/hr)	(tpy)	(%)	(%)	(lb/hr)	(tpy)
Exterior Coating Colors: Snuckers blue, Black, Red	48.42%	128.16	174.44	75%	90%	1.55	2.11
Interior Lining Colors: Red Liner	51.72%	123.71	168.38	70%		1.60	2.18

Table 8. Emissions from Curing Oven Natural Gas Burners

Description	Value	Units	Comments
Typcial Operating Hours	3,120	hr/yr	
Firing Rate	3.00	mmBtu/hr	
Heat content	1,050	Btu/ft3	

Pollutant	Emission Factor Maximum[(1)]	Emissions (lb/hr)	Emissions (tpy)
PM	7.6 lb/MMscf	0.022	0.034
PM_{10}	7.6 lb/MMscf	0.022	0.034
$PM_{2.5}$	7.6 lb/MMscf	0.022	0.034
NO_x	100.0 lb/MMscf	0.286	0.446
SO_2	0.6 lb/MMscf	0.0017	0.003
VOC	5.5 lb/MMscf	0.016	0.025
CO	84.0 lb/MMscf	0.240	0.374

(1) Emission factors from AP-42, 1.4 Natural Gas Combustion, Table. 1-4.2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion (07/1998)

Table 9. VOC and HAPs Emissions from Ring Dip Operations

Drum Rings Processing	**360**	rings/hour
Rate	**980,000**	rings/year
Coating Usage Rate	**0**	gal/ring
	0.0193	lb coating/ring

Coating Usage	Maximum Material VOC Content	Maximum Coating Usage		Uncontrolled VOM Emissions	
	(% wt.)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Ring Dip Coating	58.60%	6.95	9.46	4.07	5.54

Coating	Toluene		Xylene		Ethylbenzene		Total HAPs Emissions (tpy)
	Maximum Content (% wt.)	Emissions (tpy)	Maximum Content (% wt.)	Emissions (tpy)	Maximum Content (% wt.)	Controlled Emissions (tpy)	
Ring Dip Coating	1.56%	0.15	1.94%	0.18	0.46%	0.04	0.37

SQER Analysis compared to WAC 173-460-150

	Toluene	Xylene	Ethyl Benzene
Averaging period	24-hr	24-hr	year
SQER (lbs/averaging period)	370	16	65
Rate/averaging period	0.8083792	1.00529205	87.0044

Table 9 shows ethyl benzene over SQER. However, the ring dip coating operation is not part of this permitting process.

Table 10. VOC and HAPs Emissions from Ring Dip Operations

Description	Value	Units	Comments
Typcial Operating Hours	3,120	hr/yr	
Firing Rate	1.40	mmBtu/hr	
Heat content	1,050	Btu/ft3	

Pollutant	Emission Factor Maximum[(1)]	Emissions (lb/hr)	Emissions (tpy)
PM	7.6 lb/MMscf	0.010	0.016
PM_{10}	7.6 lb/MMscf	0.010	0.016
$PM_{2.5}$	7.6 lb/MMscf	0.010	0.016
NO_x	100.0 lb/MMscf	0.133	0.208
SO_2	0.6 lb/MMscf	0.0008	0.001
VOC	5.5 lb/MMscf	0.007	0.011
CO	84.0 lb/MMscf	0.112	0.175

(1) Emission factors from AP-42, 1.4 Natural Gas Combustion, Table. 1-4.2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion (07/1998)

Table 11. Toxic Air Pollutants Emission Increase from Cutting Porch

Toxic Air Pollutant	CAS Number	Averaging Period	SQER (lb/averaging period)	ASIL (mg/m3)	Cutting Porch Emissions (lb/averaging period)	Below SQER (Y/N)
Styrene	100-42-5	24-hr	6.50E+01	8.70E+02	5.65E-02	Y
Isophorone	78-59-1	24-hr	1.50E+02	2.00E+03	7.79E-01	Y
Methyl Ethyl Ketone	78-93-3	24-hr	3.70E+02	5.00E+03	1.06E+01	Y
1,2,4-trimethylbenzene	95-63-6	24-hr	4.40E+00	6.00E+01	1.58E+00	Y
Xylene	1330-20-7	24-hr	1.60E+01	2.20E+02	2.60E-01	Y
Cumene	98-82-8	24-hr	3.00E+01	4.00E+02	3.61E-01	Y

Potential Emissions

The potential emissions should match the actual emission, as this is already a synthetic minor and they are taking a limit of production

Through the drum furnace, there will be a limit of 601,912 drums/year.

Facility-wide Emissions

Actual Emissions

The sum of criteria pollutants are shown in the below table,

Pollutant	tpy
Filterable PM	12.35
PM10	11.99
PM2.5	7.85
NOx	8.61
SO_2	0.0039
CO	0.57
VOC	10.41

Prior to emission subtractions from current units, the following TAPS would be

	Emission Factor [(1)]	**Proposed Emissions**			**Rate per**	
Pollutant	**lb/dr**	**lb/hr**	**tpy**	**Averaging period**	**Averaging period**	**SQER**
Arsenic	9.134E-07	0.000	0.000	year	7.8E-01	0.049
Beryllium	1.215E-08	0.000	0.000	year	1.0E-02	0.068
Cadmium	3.631E-07	0.000	0.000	year	3.1E-01	0.039
Chromium (Total)	2.927E-05	0.012	0.013	year	2.5E+01	0.00065
Lead	3.053E-05	0.012	0.013	year	2.6E+01	14
Mercury	8.883E-08	0.000	0.000	24-hr	8.4E-04	0.0022
Nickel	4.637E-06	0.002	0.002	year	4.0E+00	0.62
Benzene	1.844E-06	0.001	0.001	year	1.6E+00	21
Methyl Methacrylate	1.885E-03	0.113	0.924	24-hr	2.7E+00	52
Isophorone	1.041E-03	0.062	0.510	24-hr	1.5E+00	150
1,2,4-trimethylbenzene	2.108E-03	0.127	1.033	24-hr	3.0E+00	4.4
Xylene	3.474E-04	0.021	0.170	24-hr	5.0E-01	16
Cumene	4.826E-04	0.029	0.236	24-hr	6.9E-01	30
Toluene*	N/A	0.059	0.256	24-hr	1.4E+00	370
Methyle Ethyl Ketone*	1.414E-02	0.849	6.928	24-hr	2.0E+01	370
Styrene*	1.308E-02	0.786	6.408	24-hr	1.9E+01	65
Phenol	NA	0.001	0.005	24-hr	2.9E-02	15
Xylene	N/A	0.306	1.333	24-hr	7.3E+00	16
Ethyl Benzene	N/A	3.652	0.674	year	1.3E+03	65

Because the metals are all initially above SQER, past actual emissions being removed with the old units can be applied. This additional 22 barrels per year increase will turn their additional emissions into the following:

TAP	lb/barrel	22 barrels/year	SQER
Arsenic	9.134E-07	2.009E-05	0.049
Beryllium	1.215E-08	2.673E-07	0.068
Cadmium	3.631E-07	7.989E-06	0.039
Chromium (Total)	2.927E-05	6.440E-04	0.00065
Lead	3.053E-05	6.717E-04	14
Mercury	8.883E-08	1.954E-06	0.0022
Nickel	4.637E-06	1.020E-04	0.62

Ethyl Benzene is another compound that needs closer inspection. With a SQER of 65 lbs/year, ICS will current emissions exceed this with potential to emit 1,347 lbs/year if operated at 24 hrs/day, 365 days per year. ICS reports 3 processes that emit ethyl benzene. The drum furnace is expected to release $9.497*10^{-7}$ lb/drum. The Coating line is predicted to emit 0.63 lb/year. And the Ring Dip Operations is currently releasing 87 lbs/year. However, the Ring Dip operations is not being modified, and not part of this permitting action. With those assumptions, the Ethyl Benzene increase from this permitting action would be 22 drums/year * $9.497*10^{-7}$ lb/drum + 0.63 lb/year = 0.63lbs/year well under the SQER of 65 lbs/year.

Potential Emissions

This source is a synthetic minor based on NOC 5965 with the following synthetic conditions.

[SYNTHETIC CONDITIONS]: Northwest Cooperage shall perform a source test to quantify the destruction efficiency of the control system for the quantification of the emissions of VOC compounds by EPA Method 25. Northwest Cooperage shall maintain monthly records of Methyl Ethyl Ketone, Xylene and Toluene purchased that contribute to air emissions. Northwest Cooperage shall produce a monthly summary report which shall be made available to PSAPCA personnel upon request. Northwest Cooperage shall annually report to PSAPCA with its annual emission statement all periods that exceed the above limits.[SYNTHETIC LIMITS]: Northwest Cooperage shall limit air emissions of total VOC compounds to 99 tons during any 12 consecutive months after the date of this Order. Northwest Cooperage shall limit the emissions of methyl ethyl ketone, xylene and toluene each to less than 9 tons during any 12 consecutive months after the date of this Order. Northwest Cooperage shall limit the emissions of methyl ethyl ketone, xylene and toluene combined to 24 tons during any 12 consecutive months after the date of this Order.

H. OPERATING PERMIT OR PSD

The Title V Air Operating Permit (AOP) program applicability for the entire source has been reviewed.

The facility is not a Title V air operating permit source because post project PTE remains below Title V applicability thresholds and criteria due to federally enforceable limits of the following order. The source is considered a "**synthetic minor**".

Emission increases associated with this project were reviewed for Prevention of Significant Deterioration (PSD) Program applicability. The facility is not an existing PSD major source and the increase in emissions

from this permitting action is below PSD thresholds. Based on the available information, the emissions increase will not increase from this permitting action.

I. AMBIENT TOXICS IMPACT ANALYSIS

The estimated potential toxic air pollutant (TAP) emissions at operating at 100% rated capacity and 8760 hour per year for each new or modified emission unit (*or based on limit in permit*). The table below includes estimated potential emissions of all TAP and compares those to the Small Quantity Emission Rates (SQER) in WAC 173-460-150.
TAP analysis has been done assuming 6 drums per minute for up to 12 hours per day. Based on the available SDS's and past testing, all TAPS should be below SQER limits. The calculations are in the following spreadsheet.

J. APPLICABLE RULES & REGULATIONS (ENGINEER: DELETE ANY RULES THAT ARE CLEARLY NOT APPLICABLE)

Puget Sound Clean Air Agency Regulations

SECTION 5.05 (c): The owner or operator of a registered source shall develop and implement an operation and maintenance plan to ensure continuous compliance with Regulations I, II, and III. A copy of the plan shall be filed with the Control Officer upon request. The plan shall reflect good industrial practice and shall include, but not be limited to, the following:
(1) Periodic inspection of all equipment and control equipment;
(2) Monitoring and recording of equipment and control equipment performance;
(3) Prompt repair of any defective equipment or control equipment;
(4) Procedures for startup, shut down, and normal operation;
(5) The control measures to be employed to ensure compliance with Section 9.15 of this regulation; and
(6) A record of all actions required by the plan.
The plan shall be reviewed by the source owner or operator at least annually and updated to reflect any changes in good industrial practice.

SECTION 6.09: Within 30 days of completion of the installation or modification of a stationary source subject to the provisions of Article 6 of this regulation, the owner or operator or applicant shall file a Notice of Completion with the Agency. Each Notice of Completion shall be submitted on a form provided by the Agency, and shall specify the date upon which operation of the stationary source has commenced or will commence.

SECTION 9.03: (a) It shall be unlawful for any person to cause or allow the emission of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is:
(1) Darker in shade than that designated as No. 1 (20% density) on the Ringelmann Chart, as published by the United States Bureau of Mines; or
(2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Section 9.03(a)(1).

(b) The density or opacity of an air contaminant shall be measured at the point of its emission, except when the point of emission cannot be readily observed, it may be measured at an observable point of the plume nearest the point of emission.
(c) This section shall not apply when the presence of uncombined water is the only reason for the failure of the emission to meet the requirements of this section.

SECTION 9.09: General Particulate Matter (PM) Standard. It shall be unlawful for any person to cause or allow the emission of particulate matter in excess of the following concentrations:
Equipment Used in a Manufacturing Process: 0.05 gr/dscf

SECTION 9.11: It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

SECTION 9.13: It shall be unlawful for any person to cause or allow the installation or use of any device or use of any means designed to mask the emission of an air contaminant which causes detriment to health, safety or welfare of any person.

SECTION 9.15: It shall be unlawful for any person to cause or allow visible emissions of fugitive dust unless reasonable precautions are employed to minimize the emissions. Reasonable precautions include, but are not limited to, the following:
(1) The use of control equipment, enclosures, and wet (or chemical) suppression techniques, as practical, and curtailment during high winds;
(2) Surfacing roadways and parking areas with asphalt, concrete, or gravel;
(3) Treating temporary, low-traffic areas (e.g., construction sites) with water or chemical stabilizers, reducing vehicle speeds, constructing pavement or rip rap exit aprons, and cleaning vehicle undercarriages before they exit to prevent the track-out of mud or dirt onto paved public roadways; or
(4) Covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust-bearing materials.

SECTION 9.16(c): General Requirements for Indoor Spray-Coating Operations. It shall be unlawful for any person subject to the provisions of this section to cause or allow spray-coating inside a structure, or spray-coating of any motor vehicles or motor vehicle components, unless all of the following requirements are met:
(1) Spray-coating is conducted inside an enclosed spray area;
(2) The enclosed spray area employs either properly seated paint arresters, or water-wash curtains with a continuous water curtain to control the overspray; and
(3) All emissions from the spray-coating operation are vented to the atmosphere through an unobstructed vertical exhaust vent.

REGULATION I, SECTION 9.20(a): It shall be unlawful for any person to cause or allow the operation of any features, machines or devices constituting parts of or called for by plans, specifications, or other information submitted pursuant to Article 6 of Regulation I unless such features, machines or devices are maintained in good working order.

Washington State Administrative Code

WAC 173-400-040(3): Fallout. No person shall cause or allow the emission of particulate matter 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 is deposited.

WAC 173-400-040(4): Fugitive emissions. The owner or operator of any emissions unit engaging in materials handling, construction, demolition or other operation which is a source of fugitive emission:

(a) If located in an attainment area and not impacting any nonattainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation.

WAC 173-400-100 Source classifications. (1) Source classification list.
(f) Any source, stationary source or emission unit with an emission rate of one or more pollutants equal to or greater than an "emission threshold" defined in WAC 173-400-030

WAC173-400-111(7): Construction limitations.
(a) Approval to construct or modify a stationary source becomes invalid if construction is not commenced within eighteen months after receipt of the approval, if construction is discontinued for a period of eighteen months or more, or if construction is not completed within a reasonable time. The permitting authority may extend the eighteen-month period upon a satisfactory showing by the permittee that an extension is justified.

WAC 173-400-091 Voluntary limits on emissions.
(1) Upon request by the owner or operator of a new or existing source or stationary source, the permitting authority with jurisdiction over the source shall issue a regulatory order that limits the potential to emit any air contaminant or contaminants to a level agreed to by the owner or operator and the permitting authority with jurisdiction.
(2) A condition contained in an order issued under this section shall be less than the source's or stationary source's otherwise allowable annual emissions of a particular contaminant under all applicable requirements of the chapter 70.94 RCW and the FCAA, including any standard or other requirement provided for in the Washington state implementation plan. The term "condition" refers to limits on production or other limitations, in addition to emission limitations.
(3) Any order issued under this section shall include monitoring, recordkeeping and reporting requirements sufficient to ensure that the source or stationary source complies with any condition established under this section. Monitoring requirements shall use terms, test methods, units, averaging periods, and other statistical conventions consistent with the requirements of WAC 173-400-105.
(4) Any order issued under this section must comply with WAC 173-400-171. (5) The terms and conditions of a regulatory order issued under this section are enforceable. Any proposed deviation from a condition contained in an order issued under this section shall require revision or revocation of the order.and any comments received during the public comment period have been considered.WAC-173-400-030 Definitions

(30) "Emission threshold" means an emission of a listed air contaminant at or above the following rates: Air Contaminant Annual Emission Rate

Carbon monoxide: 100 tons per year	
Fluorides:	3 tons per year
Hydrogen sulfide (H2S):	10 tons per year
Lead:	0.6 tons per year
Nitrogen oxides:	40 tons per year
Particulate matter (PM):	25 tons per year of PM emissions
10 tons per year of PM-2.5	
15 tons per year of PM-10 emissions	
Reduced sulfur compounds (including H2S):	10 tons per year
Sulfur dioxide:	40 tons per year
Sulfuric acid mist:	7 tons per year
Total reduced sulfur (including H2S):	10 tons per year
Volatile organic compounds:	40 tons per year

Federal
40 CFR 761.61(a) (1-9**)**

K. PUBLIC NOTICE

This project does meet the criteria for mandatory public notice under WAC 173-400-171(3). Criteria requiring public notice includes, but is not limited to, a project that exceeds emission threshold rates as defined in WAC 173-400-030 (e.g. 40 tpy NOx, VOC, or SO_2, 100 tpy CO, 15 tpy PM_{10}, 10 tpy $PM_{2.5}$, 0.6 tpy lead), includes a WAC 173-400-091 synthetic minor limit, has a toxic air pollutant emission increase above the acceptable source impact level in WAC 173-460-150, or has significant public interest. A notice of application was posted on the Agency's website for 15 days. A copy of the website posting is below:

New Construction Projects

Company	Address	Project Description	Date Posted	Contact Engineer
Industrial Container Services - WA, LLC	7152 1st Ave S, Seattle, WA 98108	ICS-WA is planning to replace some of the existing equipment with new or refurbished units as follows: • Replace the exiting drum furnace controlled by an afterburner with a refurbished drum furnace with an afterburner from another ICS facility. • Replace the existing shot blaster controlled by a baghouse with a new shot blaster with a baghouse. • Replace the existing spray guns in the paint booth with seventeen (17) new guns. Spray booth enclosure will also be replaced to achieve permanent total enclosure. Emissions from the booth will ducted to the existing RTO for control. • Replace the drum curing oven with a new drum curing oven which will be controlled by the existing RTO. ICS-WA is looking to remove the limitation on type of	12/2/21	Carl Slimp

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A 30 day public comment period was also held, starting on June 22nd, 2022, with the posting below. During this time we received comments from Washington Ecology on July 22, 2022, attached below, making us aware of other permits that may be needed. The result of this is included in section D.

30-day public comment.pdf

Comments on Proposed Order of A

An additional public comment period on the DNS and Draft Order of Approval was held between June 27, 2023 and July 27, 2023.

L. RECOMMENDED APPROVAL CONDITIONS

Standard Conditions:

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the installation address in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.

2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

Specific Conditions:

DRUM RECLAMATION FURNACE WITH AFTERBURNER

3. The maximum rate of production shall the drum processing rates in the reclamation furnace shall not exceed 60 industrial drums per hour. The owner/operator shall limit the total amount of drums processed to 780,000 total drums/year.

4. The drum burn out furnace shall be limited to 601,912 drums per year.

5. The owner or operator shall not cause or allow visible emissions other than uncombined water from the drum reclamation furnace afterburner stack.

6. The owner or operator shall use only natural gas as fuel in the drum reclamation furnace.

7. All drums processed in the reclamation furnace shall be 'drip dry' and shall contain no more than 1 inch of residue.

8. No drums shall be processed in the reclamation furnace unless the reclamation furnace afterburner chamber temperature is at least 1,700 degrees F.

9. An electronic interlock shall automatically shutdown the drum staging conveyor if the afterburner chamber temperature drops below 1,700 degrees F.

10. The afterburner chamber temperature shall be continuously recorded whenever drums are being processed in the reclamation furnace, and such records shall be retained for at least 2 years for inspection by Agency staff.

11. The monthly (and 12-month rolling total) emissions from the afterburner shall be estimated by multiplying the hourly emission rates measured during the source test by the hours of operation of the drum reclamation furnace afterburner.

12. Operational emission limits:
    a. Total particulate matter emissions shall not exceed 0.05 gr/dscf corrected to 7% oxygen from the drum reclamation furnace afterburner as measured by USEPA reference methods 1, 2, 3A, 4, and 5 as modified by Puget Sound Clean Air Agency Board Resolution 540 dated August 11, 1983, or other approved methods.
    b. Opacity shall not exceed 5% opacity for a period or periods aggregating more than 3 minutes during any one hour as measured by WDOE Method 9A.
    c. NOx shall not exceed 85 ppm dry corrected to 7% oxygen as determined by USEPA reference method 7E or other approved methods
    d. CO shall not exceed 400 ppm dry corrected to 7% oxygen as determined by USEPA reference method 10 or other approved methods

13. An initial source test shall be conducted within 90 days of start up of the Drum Furnace with Afterburner to determine compliance with condition 12. This shall be shown by the average of 3 60-

minute runs for each pollutant and opacity. A source test shall be done every five calendar years after to ensure compliance.

DRUM CURING OVEN CONTROLLED BY RTO

14. The Regenerative Thermal Oxidizer (RTO) shall have a destruction efficiency of at least 98% or an outlet concentration of no more than 40 ppm as propane, as determined by EPA Method 25A or other agency approved method.

15. The RTO combustion chamber temperature shall be continuously monitored and recorded whenever the paint curing oven is in operation, and such records shall be retained for at least 2 years for inspection by Agency staff.

16. The RTO combustion chamber temperature shall be at least 1600 degrees F (1-hour average) or the temperature recorded during the compliance test (whichever is lower) at all times when the paint curing oven is in operation.

17. Opacity shall not exceed 5% opacity for a period or periods aggregating more than 3 minutes during any one hour as measured by WDOE Method 9A.

18. A source test shall be conducted within 90 days of the installation of the paint booth and drum curing oven to determine compliance with conditions 14 and 17 of this Order. A source test shall be done every five calendar years after to ensure compliance.

SPRAY PAINT BOOTH

19. The monthly (and 12-month rolling total) emissions from the paint spray booths shall be estimated based on the results of a source test defined by condition 14, which shall be conducted within 90 days of the installation of the RTO in accordance with a test plan approved by the Agency.

20. The spray booths shall meet the permanent enclosure criteria as determined by EPA method 204.

21. Install and maintain a pressure drop measurement device, such as a manometer or Magnehelic, to measure the pressure drop across each exhaust filter per spray booth. Within 30 days after the installation of the spray booth, the acceptable pressure drop range for the effective operation of the filters shall be clearly marked on or nearby the gauge.

22. For spray booth operation, the owner or operator shall use high volume, low pressure (HVLP), Air Assisted Airless, LVLP, electrostatic or spray equipment approved by South Coast Air Quality Management District for their application and capable of achieving equivalent or better transfer efficiency than the HVLP spray guns

23. The owner or operator shall not use coatings that contain compounds of chromium, cadmium, lead, manganese or nickel as determined by the SDS or other documentation provided by the manufacturer or supplier.

24. The owner or operator shall use best management practices in its spray coating operation, including but not limited to their gun cleaning method. Spray guns shall be cleaned by one of the following:
    a. An enclosed spray gun cleaning system that is kept closed when not in use;
    b. Unatomized discharge of solvent into a paint waste container that is kept closed when not in use;
    c. Disassembly of the spray gun and cleaning in a vat that is kept closed while not in use; or
    d. Atomized spray into a paint waste container that is fitted with a device designed to capture atomized solvent emissions.

25. At no time may discharged solvent from equipment be atomized into the open air. The organic solvent used for cleanup of equipment, including solvent rags and paper, must be collected and returned to closed containers after use. Those containers used for the storage and disposal of organic solvent shall be kept closed except when these containers are being cleaned or when materials are being added.

26. Inspect each spray booth bench at least once per day of operation, with each inspection to include the following:
    a. Check of differential pressure across the filters in the spray booth bench to ensure operation within the acceptable range
    b. Visual checks of filter condition and fit to ensure complete coverage over exhaust plenum
    If the spray booth bench is operating outside of the acceptable differential range or without complete filter coverage, discontinue spray coating until corrective action has been taken.

SHOT BLASTER CONTROLLED BY BAGHOUSE

27. There shall be no visible emissions or fallout from the baghouse.

28. Total particulate matter emissions shall not exceed 0.05 gr/dscf per PSCAA Regulation II Section 9.09.

29. The owner or operator shall install and maintain a gauge to measure the pressure drop across the baghouse exhaust filters. Within 90 days after beginning operations, the acceptable range for the gauge shall be clearly marked on or nearby the gauge.

30. Once during each week the baghouse is used, the owner or operator shall perform inspections that shall include a check of the exhaust for visible emissions and fallout, and a check of the pressure drop across the filters.

31. If visible emissions, fallout, or abnormal pressure drop are observed, the owner or operator shall both investigate the cause and initiate repairs or shut down the processes vented to the baghouse within 24 hours of the observation. The result shall be recorded in a designated Operation & Maintenance (O&M) log.

32. Records of all weekly inspections and corrective actions shall be maintained for at least two years and made available to Puget Sound Clean Air Agency personnel upon request.

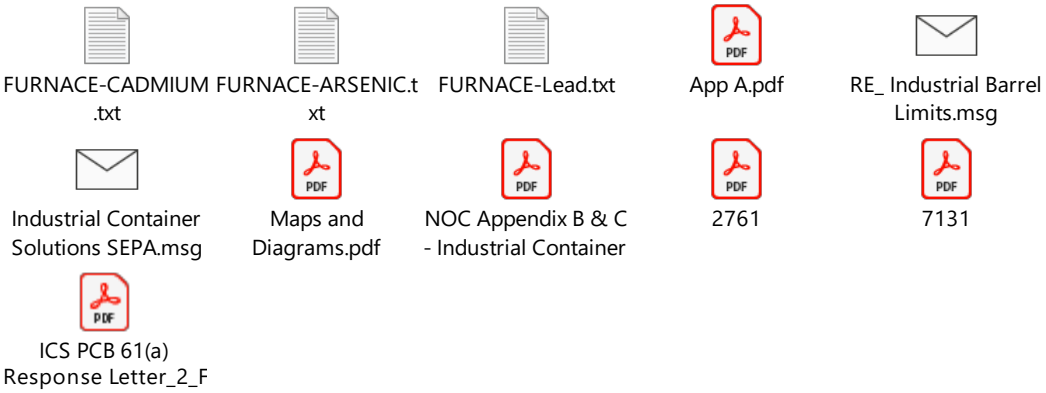
33. The shot blaster installed in 1988 shall be removed prior to the start up of the new shot blaster.

34. This Order of Approval No. 12196 hereby cancels and supersedes Order of Approval No. 9500 dated September 22, 2006

Complaint Response Log

35. The owner and/or operator shall keep a log of any and all odor complaints received and any corrective action taken as a result of these odor complaints.

M. CORRESPONDENCE AND SUPPORTING DOCUMENTS



N. REVIEWS

Reviews	Name	Date
Engineer:	Carl Slimp	4/11/22, 5/22/23
Inspector:	Blaine Nesbit, Melissa McAfee, Rain Yates	4/12/22
Second Review:	John Dawson	5/12/22, 5/22/23
Applicant Name:	Brian Perez, Darina Demirev	6/9/22