



**TECHNICAL SUPPORT DOCUMENT**

**Air Discharge Permit 22-3549  
Air Discharge Permit Application CL-3203**

**Issued: November 30, 2022**

Coughlin Custom Cabinets, Inc.

**SWCAA ID – 2577**

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## ABBREVIATIONS

### *List of Acronyms*

ADP .....	Air Discharge Permit	NESHAP .....	National Emission Standards for Hazardous Air Pollutants
AP-42 .....	Compilation of Emission Factors, AP-42, 5th Edition, Volume 1, Stationary Point and Area Sources – published by EPA	NOV .....	Notice of Violation/
ASIL.....	Acceptable Source Impact Level	NSPS .....	New Source Performance Standard
BACT.....	Best available control technology	PSD .....	Prevention of Significant Deterioration
BART .....	Best Available Retrofit Technology	RACT.....	Reasonably Available Control Technology
CAM .....	Compliance Assurance Monitoring	RCW .....	Revised Code of Washington
CAS#.....	Chemical Abstracts Service registry number	SCC.....	Source Classification Code
CFR.....	Code of Federal Regulations	SDS .....	Safety Data Sheet
EPA.....	U.S. Environmental Protection Agency	SQER .....	Small Quantity Emission Rate listed in WAC 173-460
EU .....	Emission Unit	Standard .....	Standard conditions at a temperature of 68°F (20°C) and a pressure of 29.92 in Hg (760 mm Hg)
LAER .....	Lowest achievable emission rate	SWCAA .....	Southwest Clean Air Agency
MACT.....	Maximum Achievable Control Technologies	T-BACT .....	Best Available Control Technology for toxic air pollutants
mfr.....	Manufacturer	WAC .....	Washington Administrative Code

### *List of Units and Measures*

µg/m <sup>3</sup> .....	Micrograms per cubic meter	lb/yr.....	pounds per year
µm .....	Micrometer (10 <sup>-6</sup> meter)	MMBtu .....	Million British thermal unit
acfm .....	Actual cubic foot per minute	MMcf .....	Million cubic feet
bhp .....	Brake horsepower	oz/yd <sup>2</sup> .....	ounce per square yard
dscfm.....	Dry Standard cubic foot per minute	ppm .....	Parts per million
g/dscm.....	Grams per dry Standard cubic meter	ppmv .....	Parts per million by volume
gpm .....	Gallon per minute	ppmvd .....	Parts per million by volume, dry
gr/dscf .....	Grain per dry standard cubic foot	ppmw .....	Parts per million by weight
hp .....	Horsepower	psig .....	Pounds per square inch, gauge
hp-hr.....	Horsepower-hour	rpm.....	Revolution per minute
kW.....	Kilowatt	scfm .....	Standard cubic foot per minute
		tph.....	Ton per hour
		tpy .....	Tons per year

### *List of Chemical Symbols, Formulas, and Pollutants*

C <sub>3</sub> H <sub>8</sub> .....	Propane	O <sub>3</sub> .....	Ozone
CH <sub>4</sub> .....	Methane	PM .....	Particulate Matter with an aerodynamic diameter 100 µm or less
CO .....	Carbon monoxide	PM <sub>10</sub> .....	PM with an aerodynamic diameter 10 µm or less
CO <sub>2</sub> .....	Carbon dioxide	PM <sub>2.5</sub> .....	PM with an aerodynamic diameter 2.5 µm or less
CO <sub>2e</sub> .....	Carbon dioxide equivalent	SO <sub>2</sub> .....	Sulfur dioxide
H <sub>2</sub> S .....	Hydrogen sulfide	SO <sub>x</sub> .....	Sulfur oxides
HAP .....	Hazardous air pollutant listed pursuant to Section 112 of the Federal Clean Air Act	TAP .....	Toxic air pollutant pursuant to Chapter 173-460 WAC
HCl .....	Hydrochloric acid	TGOC .....	Total Gaseous Organic Carbon
Hg .....	Mercury	TOC .....	Total Organic Carbon
N <sub>2</sub> O .....	Nitrous oxide	TSP .....	Total Suspended Particulate
NH <sub>3</sub> .....	Ammonia	VOC .....	Volatile organic compound
NO <sub>2</sub> .....	Nitrogen dioxide		
NO <sub>x</sub> .....	Nitrogen oxides		
O <sub>2</sub> .....	Oxygen		

Terms not otherwise defined have the meaning assigned to them in the referenced regulations or the dictionary definition, as appropriate.

## 1. FACILITY IDENTIFICATION

Applicant Name: Coughlin Custom Cabinets, Inc.  
Applicant Address: 811 SE Grace Ave., Battle Ground, WA 98604

Facility Name: Coughlin Custom Cabinets, Inc.  
Facility Address: 811 SE Grace Ave., Battle Ground, WA 98604

SWCAA Identification: 2577

Contact Person: Patrick Coughlin

Primary Process: Cabinetry Manufacturing  
SIC/NAICS Code: 2434: Wood Kitchen Cabinets  
33711: Wood Kitchen Cabinet and Countertop Manufacturing

Facility Classification: Natural Minor  
Primary Process: Wood Kitchen Cabinets / Wood Kitchen Cabinet and Countertop Manufacturing

## 2. FACILITY DESCRIPTION

Coughlin Custom Cabinets, Inc. (Coughlin) operates a wood cabinet manufacturing facility located in Battle Ground, Washington. The facility receives raw, dried lumber and converts the material into finished cabinetry products. The facility generally operates one 8-hour shift per day, 5 days a week.

## 3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit (ADP) application number CL-3203 dated July 14, 2022. Coughlin submitted ADP application CL-3203 requesting the following:

- Approval for an existing cabinetry manufacturing facility that includes a spray booth, a baghouse, and space heating.

This is the initial permitting action for this facility.

## 4. PROCESS DESCRIPTION

- 4.a. Woodworking. Coughlin operates a variety of woodworking machines to fabricate cabinet pieces.

- 4.b. Spray Coating Application. Subsequent to fabrication and assembly, cabinet pieces are spray coated with various stains, sealers, and finishes. The exact combination of coatings varies from one cabinet piece to another, depending on customer specifications.
- 4.c. Space Heating. Multiple natural gas fired space heaters are used to provide space heating for the work areas at the Coughlin facility.

## 5. EQUIPMENT/ACTIVITY IDENTIFICATION

- 5.a. Spray Booth. The Binks spray booth model PCF-15-8-TLH is a three-sided booth, measuring 10' wide by 7'10" high by 16' deep, manufactured in 1999. The booth contains 36 Superior Fibers LLC. GA10 fiberglass filters 20.25" by 20.25" rated at 98.81% capture efficiency. The facility has two Graco spray guns, model numbers G-15 air-assisted spray gun and Contractor PC airless spray gun.

Exhaust Flow:	12,985 acfm
Stack Diameter:	36"
Stack Height:	~9' above ground level
Latitude/Longitude:	~45.77482 -122.52656

- 5.b. Baghouse. One LMC model FSD baghouse (s/n 01672), manufactured in 1999, equipped with 48 filter bags (6" dia x 96" long) constructed of 10 oz/yd<sup>2</sup> Duralife fabric reported to have an efficiency of 0.002 gr/dscf. Rated airflow is identified as 4,000 dscfm. It has a filter area of 270 ft<sup>3</sup>. Filter bags are cleaned while in use with a reverse-jet cleaning system. Baghouse exhaust is discharge to the atmosphere through a 20" diameter exhaust stack at a height of approximately 9' above building. Approximately seven months a year the exhaust is routed back into the shop.

The baghouse controls emissions from the wood working building.

Latitude/Longitude:	~45.77482 -122.52656
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- 5.c. Space Heaters. Two Reznor heaters, models F200-E, rated at 0.2 MMBtu/hr, and F75-E-3, rated at 0.075 MMBtu/hr. They were manufactured in 1999 and are used only during the winter.

### *Insignificant Emission Units.*

The following pieces of facility equipment have been determined to have insignificant emissions and are not registered as emission units:

- Various woodworking equipment (table saw, band saw, miter saw, shapers, edgebenders, planers, sanders, etc.)

5.d. Equipment/Activity Summary.

ID No.	Equipment/Activity	Control Equipment/Measure
1	Binks Spray Booth Model PCF-15-8-TLH	High Efficiency Filtration, High Transfer Efficiency Spray Equipment
2	Woodworking Equipment	LMC Model FSD Baghouse
3	Space Heaters	Low Sulfur Fuel (Natural Gas)

**6. EMISSIONS DETERMINATION**

Unless otherwise specified by SWCAA, actual emissions must be determined using the specified input parameter listed for each emission unit and the following hierarchy of methodologies:

- (a) Continuous emissions monitoring system (CEMS) data;
- (b) Source emissions test data (EPA reference method). When source emissions test data conflicts with CEMS data for the time period of a source test, source test data must be used;
- (c) Source emissions test data (other test method); and
- (d) Emission factors or methodology provided in this TSD.

- 6.a. Spray Booth. VOC and TAP/HAP emissions are calculated using a mass balance approach, using the facilitywide usage of surface coating products. VOC and TAP/HAP emissions for each product are determined by taking the percent VOC (or percent volatiles minus water and exempt) and percent TAP and multiplying by the usage (by weight). VOC and TAP/HAP content and product density are found in the SDS or the Technical Data Sheet for the product.

*Example.* Given a specific coating with a density of 8.5 lb/gal, a VOC content of 7.5 lb/gal, and a toluene content of 2%, assuming 10 gal/yr of usage, emissions of toluene can be determined:

$$\begin{aligned}
 10 \text{ gal/yr} \times 8.5 \text{ lb/gal VOC} &= 85 \text{ lb/yr total usage} \\
 10 \text{ gal/yr} \times 7.5 \text{ lb/gal VOC} &= 75 \text{ lb/yr VOC} \\
 85 \text{ lb/yr total usage} \times 2\% \text{ toluene} &= 1.7 \text{ lb/yr toluene}
 \end{aligned}$$

The SDS may specifically list the solids content (as lb/gal or %), but if not, the solids content can be inferred by taking the total density of the product minus the total VOC of the product (this method provides a conservative maximum). Using the solids content of each product, the particulate (PM and PM<sub>10</sub>) emissions can be determined assuming a 65% transfer efficiency by using high volume low pressure (HVLP) guns, and the control efficiency of the filter media. All of the emitted PM is assumed to be PM<sub>10</sub> and PM<sub>2.5</sub> is assumed to be 78% of the PM/PM<sub>10</sub>, by weight, based on data from Version 2.0 of EPA's Particulate Matter Calculator for SCC 40200101.

*Example.* Given 10 gal/yr usage of a coating with a density of 7.1 lb/gal with 20% solids and assuming a transfer efficiency of 65% with filter arrestance of 99%, emissions of PM<sub>10</sub> and PM<sub>2.5</sub> can be determined:

$$10 \text{ gal/yr} \times 7.1 \text{ lb/gal} \times 20\% \times (100\% - 65\%) \times (100\% - 99\%) = 0.05 \text{ lb/yr PM}_{10}$$

$$0.05 \text{ lb/yr PM}_{10} \times 78\% = 0.04 \text{ lb/yr PM}_{2.5}$$

A list of the products in use, the SDS or TDS, and expected annual usage was provided as part of the ADP application. SWCAA provided an inflation factor of 20% for growth. It is recognized that the actual usage of products will vary. Emission estimates were based on the provided information using the procedures listed above. Emissions are determined to be as follows:

Pollutant	Emission Factors	PTE* tpy	Source
VOC	Varies	2.27	Mass Balance
PM <sup>†</sup>	Varies	0.015	Mass Balance
PM <sub>10</sub> <sup>†</sup>	Varies	0.015	Mass Balance
PM <sub>2.5</sub> <sup>‡</sup>	Varies	0.012	Mass Balance
<p>* PTE assumes a theoretical maximum usage for all paints and solvents. In reality, the usage rates will vary, including the addition of new products in the future.</p> <p>† Emission calculations assume that coatings have an average of 68% solids (based on review of products supplied by Permittee), are sprayed with a transfer efficiency of 65%, and that the spray booth filters have an arrestance of 98%. Solids content will vary by product.</p> <p>‡ PM<sub>2.5</sub> emissions are assumed to be 78% of PM<sub>10</sub> per Version 2.0 of EPA's Particulate Matter Calculator for SCC 40200101.</p>			

Annual emissions must be determined by mass balance procedures as outlined above, unless otherwise specified by SWCAA.

Pollutant	CAS Number	Category	Potential Emissions (lb/yr)	Project Increase (lb/yr)	WAC 173-460 SQER (lb/yr)
Acetone	67-64-1	TAP B	210	0.0	43,748
2-butoxyethanol	111-76-2	TAP B	35	0.0	43,748
n-Butyl Acetate	123-86-4	TAP B	1,100	0.0	43,748
n-Butyl Alcohol	71-36-3	TAP B	125	0.0	43,748
Carbon Black	1333-86-4	TAP B	15	0.0	1,750
Cumene	98-82-8	HAP/TAP B	15	0.0	43,748
Ethanol	64-17-5	TAP B	300	0.0	43,748
Ethyl Benzene	100-41-4	HAP/TAP B	15	0.0	43,748
Formaldehyde	50-00-0	HAP/TAP A	0.2	0.0	20



Pollutant	CAS Number	Category	Potential Emissions (lb/yr)	Project Increase (lb/yr)	WAC 173-460 SQER (lb/yr)
Iron Oxide	1309-37-1	TAP B	8	0.0	1,750
Isobutanol	78-83-1	TAP B	360	0.0	43,748
Isobutyl Acetate	110-19-0	TAP B	230	0.0	43,748
Isopropanol	67-63-0	TAP B	205	0.0	43,748
Methanol	67-56-1	HAP/TAP B	65	0.0	43,748
Methyl Ethyl Ketone	78-93-3	HAP/TAP B	375	0.0	43,748
Methyl n-Amyl Ketone	110-43-0	TAP B	35	0.0	43,748
Toluene	108-88-3	HAP/TAP B	140	0.0	43,748
1,2,3 Trimethylbenzene	526-73-8	TAP B	0.5	0.0	43,748
1,2,4 Trimethylbenzene	95-63-6	TAP B	175	0.0	43,748
Xylene	1330-20-7	HAP/TAP B	75	0.0	43,748

- 6.b. LMC Baghouse. PM emissions from the material collection baghouse are calculated from a rated discharge of 4,000 cfm, an emission concentration of 0.005 gr/dscf, and 8,760 hr/yr of operation. All PM emissions are assumed to be PM<sub>10</sub>. PM<sub>2.5</sub> emissions are assumed to be 53% of PM<sub>10</sub> emissions (EPA PM Calculator Ver 2.0 / SCC-30703099).

<u>Pollutant</u>	<u>Emission Rate</u>	<u>Potential Emissions</u>
PM/PM <sub>10</sub>	0.17 lb/hr	0.75 tpy
PM <sub>2.5</sub> (53% PM <sub>10</sub> )		0.40 tpy

- 6.c. Space Heaters. Emissions from the combustion of natural gas in the space heaters were calculated with the assumption that the equipment will operate at full rated capacity for 8,760 hours per year. Emissions of NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, formaldehyde, and benzene were calculated using emission factors from AP-42 Section 1.4 (7/98). Greenhouse gas emissions were calculated using the procedures specified in 40 CFR 98. All PM is assumed to be PM<sub>10</sub>/PM<sub>2.5</sub>.

<b>Space Heaters</b>						
Heat Rate =		0.275 MMBtu/hr				
Natural Gas Heat Value =		1,020 Btu/scf for AP-42 emission factors				
Natural Gas Heat Value =		1,026 Btu/scf for 40 CFR 98 GHG emission factors				
Fuel Consumption =		2.362 MMscf/yr				
Pollutant	Emission factor		Emissions		Emission Factor Source	
	lb/MMBtu	lb/MMscf	lb/hr	tpy		
NO <sub>x</sub>	0.0980	100	0.027	0.12	AP-42 Sec. 1.4 (7/98)	
CO	0.0824	84	0.023	0.10	AP-42 Sec. 1.4 (7/98)	
VOC	0.0054	5.5	1.48E-03	0.0065	AP-42 Sec. 1.4 (7/98)	
SO <sub>x</sub> as SO <sub>2</sub>	0.0006	0.6	1.62E-04	7.09E-04	AP-42 Sec. 1.4 (7/98)	
PM	0.0075	7.6	0.0020	0.0090	AP-42 Sec. 1.4 (7/98)	
PM <sub>10</sub>	0.0075	7.6	0.0020	0.0090	AP-42 Sec. 1.4 (7/98)	
PM <sub>2.5</sub>	0.0075	7.6	0.0020	0.0090	AP-42 Sec. 1.4 (7/98)	
Benzene [71-43-2]	2.06E-06	0.0021	5.66E-07	2.48E-06	AP-42 Sec. 1.4 (7/98)	
Formaldehyde [50-00-0]	7.35E-05	0.075	2.02E-05	8.86E-05	AP-42 Sec. 1.4 (7/98)	
Greenhouse Gases		GWP	CO <sub>2</sub> e		tpy, CO <sub>2</sub> e	Emission Factor Src
	kg/MMBtu		lb/MMBtu	lb/MMscf		
CO <sub>2</sub>	53.06	1	116.98	120,019	140.9	40 CFR 98
CH <sub>4</sub>	0.001	25	0.055	56.55	0.1	40 CFR 98
N <sub>2</sub> O	0.0001	298	0.066	67.41	0.1	40 CFR 98
Total GHG - CO <sub>2</sub> e			117.098	120,143	141.0	

- 6.d. Emissions Summary

<b>Air Pollutant</b>	<b>Potential to Emit (tpy)</b>	<b>Project Impact (tpy)</b>
NO <sub>x</sub>	0.12	0.12
CO	0.10	0.10
VOC	2.28	2.28
SO <sub>2</sub>	0.00071	0.00071
PM	0.77	0.77

<b>Air Pollutant</b>	<b>Potential to Emit (tpy)</b>	<b>Project Impact (tpy)</b>
PM <sub>10</sub>	0.77	0.77
PM <sub>2.5</sub>	0.19	0.19
CO <sub>2</sub> /CO <sub>2e</sub>	141	141
TAPs	1.44	1.44
HAPs	0.13	0.13

## 7. REGULATIONS AND EMISSION STANDARDS

Regulations have been established for the control of emissions of air pollutants to the ambient air. Regulations applicable to the proposed facility that have been used to evaluate the acceptability of the proposed facility and establish emission limits and control requirements include, but are not limited to, the following regulations, codes, or requirements. These items establish maximum emissions limits that could be allowed and are not to be exceeded for new or existing facilities. More stringent limits are established in this Permit consistent with implementation of Best Available Control Technology (BACT):

- 7.a. Title 40 Code of Federal Regulations (40 CFR) Subpart HHHHHH (63.11169 et seq.) "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources" establishes standards and work practices for all area sources engaged in paint stripping operations using methylene chloride, autobody refinishing operations, or spray coating of metal or plastic parts with coatings that contain chromium, lead, manganese, nickel, or cadmium (target HAPs). This facility does not spray coat metal or plastic parts, so this regulation is not applicable.
- 7.b. Revised Code of Washington (RCW) 70A.15.2040 empowers any activated air pollution control authority to prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution within its jurisdiction. An air pollution control authority may issue such orders as may be necessary to effectuate the purposes of the Washington Clean Air Act (RCW 70A.15) and enforce the same by all appropriate administrative and judicial proceedings subject to the rights of appeal as provided in Chapter 62, Laws of 1970 ex. sess.
- 7.c. RCW 70A.15.2210 provides for the inclusion of conditions of operation as are reasonably necessary to assure the maintenance of compliance with the applicable ordinances, resolutions, rules and regulations when issuing an ADP for installation and establishment of an air contaminant source.
- 7.d. Washington Administrative Code (WAC) 173-460 "Controls for New Sources of Toxic Air Pollutants" requires Best Available Control Technology for toxic air pollutants (T-BACT), identification and quantification of emissions of toxic air pollutants, and demonstration of protection of human health and safety.

- 7.e. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM<sub>10</sub>, PM<sub>2.5</sub>, lead, SO<sub>2</sub>, NO<sub>x</sub>, ozone, and CO in the ambient air, which must not be exceeded. The facility emits PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub>, and CO; therefore, certain sections of this regulation apply.
- 7.f. SWCAA 400-040 "General Standards for Maximum Emissions" requires all new and existing sources and emission units to meet certain performance standards with respect to Reasonably Available Control Technology (RACT), visible emissions, fallout, fugitive emissions, odors, emissions detrimental to persons or property, SO<sub>2</sub>, concealment and masking, and fugitive dust.
- 7.g. SWCAA 400-040(1) "Visible Emissions" requires that emissions of an air contaminant from any emissions unit must not exceed twenty percent opacity for more than three minutes in any one hour at the emission point, or within a reasonable distance of the emission point.
- 7.h. SWCAA 400-040(2) "Fallout" requires that emissions of PM from any source must not be deposited beyond the property under direct control of the owner(s) or operator(s) of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.
- 7.i. SWCAA 400-040(3) "Fugitive Emissions" requires that reasonable precautions be taken to prevent the fugitive release of air contaminants to the atmosphere.
- 7.j. SWCAA 400-040(4) "Odors" requires any source which generates odors that may unreasonably interfere with any other property owner's use and enjoyment of their property to use recognized good practice and procedures to reduce these odors to a reasonable minimum. This source must be managed properly to maintain compliance with this regulation.
- 7.k. SWCAA 400-040(6) "Sulfur Dioxide" requires that no person is allowed to emit a gas containing in excess of 1,000 ppm of SO<sub>2</sub>, corrected to 7% O<sub>2</sub> or 12% CO<sub>2</sub> as required by the applicable emission standard for combustion sources.
- 7.l. SWCAA 400-040(8) "Fugitive Dust Sources" requires that reasonable precautions be taken to prevent fugitive dust from becoming airborne, and minimize emissions.
- 7.m. SWCAA 400-050 "Emission Standards for Combustion and Incineration Units" requires that all provisions of SWCAA 400-040 be met and that no person is allowed to cause or permit the emission of PM from any combustion or incineration unit in excess of 0.23 g/Nm<sup>3</sup><sub>dry</sub> (0.1 gr/dscf) of exhaust gas at standard conditions.
- 7.n. SWCAA 400-060 "Emission Standards for General Process Units" requires that all new and existing general process units do not emit PM in excess of 0.23 g/Nm<sup>3</sup><sub>dry</sub> (0.1 gr/dscf) of exhaust gas.

- 7.o. SWCAA 400-109 "Air Discharge Permit Applications" requires that an ADP application be submitted for all new installations, modifications, changes, or alterations to process and emission control equipment consistent with the definition of "new source". Sources wishing to modify existing permit terms may submit an ADP application to request such changes. An ADP must be issued, or written confirmation of exempt status must be received, before beginning any actual construction, or implementing any other modification, change, or alteration of existing equipment, processes, or permits.
- 7.p. SWCAA 400-110 "New Source Review" requires that SWCAA issue an ADP in response to an ADP application prior to establishment of the new source, emission unit, or modification.
- 7.q. SWCAA 400-113 "Requirements for New Sources in Attainment or Nonclassifiable Areas" requires that no approval to construct or alter an air contaminant source will be granted unless it is evidenced that:
- (1) The equipment or technology is designed and will be installed to operate without causing a violation of the applicable emission standards;
  - (2) BACT will be employed for all air contaminants to be emitted by the proposed equipment;
  - (3) The proposed equipment will not cause any ambient air quality standard to be exceeded; and
  - (4) If the proposed equipment or facility will emit any toxic air pollutant regulated under WAC 173-460, the proposed equipment and control measures will meet all the requirements of that Chapter.
- 7.r. SWCAA 490 "Emission Standards and Controls for Sources Emitting Volatile Organic Compounds" establishes emission standards and control requirements for sources of VOC located in ozone nonattainment or maintenance plan areas. SWCAA 490-204 "Graphic Arts Systems" applies to printing systems including flexographic printing systems that use more than 100 tpy of VOCs as a component of ink, for the thinning of ink, cleaning of presses, press components and equipment. The permittee does not use more than 100 tpy of VOCs, and is not in an ozone maintenance plan area; therefore, the standards in this section do not apply to the permittee.

## **8. RACT/BACT/BART/LAER/PSD/CAM DETERMINATIONS**

The proposed equipment and control systems incorporate BACT for the types and amounts of air contaminants emitted by the processes as described below:

### *BACT Determination(s)*

- 8.a. BACT Determination – Spray Booth. The proposed use of an enclosed spray booth operated at the rated air flow, equipped with arrestors with a minimum of 98% capture efficiency and the use of HVLP spray guns (or equivalent) operating at maximum cap pressure of 10 psig has been determined to meet the requirements of BACT for the types and quantities of emissions from the spray booth.

- 8.b. BACT Determination – Natural Gas-Fired Space Heaters. The proposed use of low sulfur fuel (natural gas) has been determined to meet the requirements of BACT for heating the facility.
- 8.c. BACT Determination – Baghouse. The use of process enclosure (process building) and high efficiency particulate filtration (baghouse) has been determined to meet the requirements of BACT for the cabinetry facility.
- 8.d. Prevention of Significant Deterioration (PSD) Applicability Determination. This permitting action will not result in a potential increase in emissions equal to or greater than the PSD thresholds. Therefore, PSD review is not applicable to this action.
- 8.e. Compliance Assurance Monitoring (CAM) Applicability Determination. CAM is not applicable to any emission unit at this facility because it is not a major source and is not required to obtain a Part 70 (Title V) permit.

## 9. AMBIENT IMPACT ANALYSIS

- 9.a. Criteria Air Pollutant Review. Emissions of NO<sub>x</sub>, CO, PM, VOC (as a precursor to O<sub>3</sub>), and SO<sub>2</sub> are emitted at levels where no adverse ambient air quality impact is anticipated.
- 9.b. Toxic Air Pollutant Review.  
Based on the emission calculations in accordance with Section 6 for the emission units and activities described in ADP application CL-3203, none of the estimated emission rates exceed the Small Quantity Emission Rate (SQER) specified in WAC 173-460; therefore, no adverse ambient air quality impact is anticipated.

### Conclusions

- 9.c. Operation of the cabinetry facility, as proposed in ADP application CL-3203, will not cause the ambient air quality requirements of 40 CFR 50 "National Primary and Secondary Ambient Air Quality Standards" to be violated.
- 9.d. Operation of the cabinetry facility as proposed in ADP application CL-3203, will not cause the requirements of WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" or WAC 173-476 "Ambient Air Quality Standards" to be violated.
- 9.e. The cabinetry facility, as proposed in ADP application CL-3203, will not violate emission standards for sources as established under SWCAA General Regulations Sections 400-040 "General Standards for Maximum Emissions," 400-050 "Emission Standards for Combustion and Incineration Units," and 400-060 "Emission Standards for General Process Units."

## 10. DISCUSSION OF APPROVAL CONDITIONS

SWCAA has made a determination to issue ADP 22-3549 in response to ADP application CL-3203. ADP 22-3549 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

This is the initial permitting action for the facility.

- 10.a. General Basis. Approval conditions for equipment affected by this permitting action incorporate the operating schemes proposed by the applicant in ADP application CL-3203. Unless otherwise requested by the applicant, emission limits for approved equipment are based on the potential emission calculations in Section 6 of this TSD. BACT is implemented as proposed for each emission unit.

- 10.b. Emission Limits. Facility-wide emission limits are based on the sum of the emission limits for approved equipment calculated in Section 6 of this TSD.

Visible emissions from the spray booth and baghouse exhaust systems have been limited to zero percent opacity, consistent with proper operation.

- 10.c. Operational Limits and Requirements. Approval conditions for the spray coating operation require the facility to minimize emissions through a combination of booth enclosure with particulate filtration, good work practices, and high transfer efficiency coating equipment

Approval conditions require that SWCAA be notified prior to the use of new coating or finishing materials at the facility. This notification will allow SWCAA and the permittee to assess the potential adverse air quality impact of a process or material change. Changes that result in significant air quality impacts will require New Source Review prior to implementation.

- 10.d. Monitoring and Recordkeeping Requirements. Sufficient monitoring and recordkeeping were established to document compliance with the annual emission limits and provide for general requirements (e.g., excess emission reporting, annual emission inventory submission), and assist in the compliance assessment during on-site inspections. Records of maintenance activities and the results of periodic inspections conducted by facility personnel are required because they are valuable tools for regulatory inspectors and plant personnel. In addition, these records can be used to determine appropriate operating and maintenance requirements in a future permitting action.

Differential pressure across the spray booth filters must be recorded at least weekly to assist in evaluating whether the booth filters are operating properly. Large changes in differential pressure can indicate operational problems.

The permittee is required to record each occurrence of maintenance and repairs to applicable equipment so that SWCAA and the permittee can assure that the equipment is being maintained properly and evaluate whether emission factors remain valid.

- 10.e. Reporting Requirements. The permit requires reporting of the annual air emissions inventory and reporting of the data necessary to develop the inventory (material usage and disposal). Upset conditions with the potential to cause excess emissions must be reported immediately in order to qualify for relief from penalty in accordance with SWCAA 400-107 for unavoidable exceedances. In addition, prompt reporting allows for accurate investigation into the cause of the event and prevention of similar future incidents. The submittal date refers to the earlier of the date the report is delivered to SWCAA or the postmarked date if sent through the US Post Office.

The permittee is also required to notify SWCAA prior to the use of new materials at the facility that could result in emissions of toxic or hazardous air pollutants. Such notification allows SWCAA to assess the potential adverse air quality impact of a process or material change. Changes that could result in significant air quality impacts are subject to formal review prior to implementation.

## **11. START-UP AND SHUTDOWN/ALTERNATIVE OPERATING SCENARIOS/POLLUTION PREVENTION**

- 11.a. Start-up and Shutdown Provisions. Pursuant to SWCAA 400-081 "Start-up and Shutdown", technology-based emission standards and control technology determinations must take into consideration the physical and operational ability of a source to comply with the applicable standards during start-up or shutdown. Where it is determined that a source is not capable of achieving continuous compliance with an emission standard during start-up or shutdown, SWCAA will include appropriate emission limitations, operating parameters, or other criteria to regulate performance of the source during start-up or shutdown.

To SWCAA's knowledge, this facility can comply with all applicable standards during startup and shutdown.

- 11.b. Alternate Operating Scenarios. SWCAA conducted a review of alternate operating scenarios applicable to equipment affected by this permitting action. The permittee did not propose or identify any applicable alternate operating scenarios. Therefore, none were included in the approval conditions.
- 11.c. Pollution Prevention Measures. SWCAA conducted a review of possible pollution prevention measures for the facility. No pollution prevention measures were identified by either the permittee or SWCAA separate or in addition to those measures required under BACT considerations. Therefore, none were included in the approval conditions.



**12. EMISSION MONITORING AND TESTING****12.a. Emission Testing Requirements.**

There are no emission monitoring or testing requirements established as part of this permitting action.

**13. FACILITY HISTORY****13.a. General History.** The facility has not been permitted in the past.**13.b. Compliance History.** The following compliance issues have been identified for this facility:

<b>NOV</b>	<b>Date</b>	<b>Violation</b>
10706	May 19, 2022	Failure to provide information requested by the Agency specific to the control, recovery or release of air contaminants into the atmosphere.

**14. PUBLIC INVOLVEMENT OPPORTUNITY****14.a. Public Notice for ADP Application CL-3203.** Public notice for ADP application CL-3203 was published on the SWCAA website for a minimum of fifteen (15) days beginning on July 14, 2022.**14.b. Public/Applicant Comment for ADP Application CL-3203.** SWCAA did not receive specific comments, a comment period request, or any other inquiry from the public or the applicant regarding ADP application CL-3203. Therefore, no public comment period was provided for this permitting action.**14.c. State Environmental Policy Act.** After review of the SEPA Checklist for this project, SWCAA has determined that the project does not have a probable significant impact on the environment and has issued Determination of Non-Significance 22-036. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c).