



TECHNICAL SUPPORT DOCUMENT

**Air Discharge Permit 24-3678
Air Discharge Permit Application CL-3280**

Issued: December 23, 2024

Mackin's Prairie Auto Body

SWCAA ID – 2816

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ABBREVIATIONS

List of Acronyms

ADP.....Air Discharge Permit	NESHAPNational Emission Standards for Hazardous Air Pollutants
AP-42Compilation 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
BARTBest 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	SDSSafety Data Sheet
EPA.....U.S. Environmental Protection Agency	SQERSmall 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)
HVLP.....High Volume Low Pressure	SWCAA.....Southwest Clean Air Agency
LAER.....Lowest achievable emission rate	T-BACT.....Best Available Control Technology for toxic air pollutants
MACT.....Maximum Achievable Control Technologies	WAC.....Washington Administrative Code
mfr.....Manufacturer	

List of Units and Measures

µg/m ³Micrograms per cubic meter	MMBtu.....Million British thermal unit
acfm.....Actual cubic foot per minute	MMcf.....Million cubic feet
bhp.....Brake horsepower	ppm.....Parts per million
dscfm.....Dry Standard cubic foot per minute	ppmv.....Parts per million by volume
g/dscm.....Grams per dry Standard cubic meter	ppmvd.....Parts per million by volume, dry
gpm.....Gallon per minute	ppmw.....Parts per million by weight
gr/dscf.....Grain per dry standard cubic foot	psig.....Pounds per square inch, gauge
hp.....Horsepower	rpm.....Revolution per minute
hp-hr.....Horsepower-hour	scfm.....Standard cubic foot per minute
kW.....Kilowatt	tph.....Ton per hour
	tpy.....Tons per year

List of Chemical Symbols, Formulas, and Pollutants

C ₃ H ₈	Propane	O ₃	Ozone
CH ₄	Methane	PM.....	Particulate Matter with an aerodynamic diameter 100 μm or less
CO	Carbon monoxide	PM ₁₀	PM with an aerodynamic diameter 10 μm or less
CO ₂	Carbon dioxide	PM _{2.5}	PM with an aerodynamic diameter 2.5 μm or less
CO _{2e}	Carbon dioxide equivalent	SO ₂	Sulfur dioxide
H ₂ S	Hydrogen sulfide	SO _x	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 ₂ O	Nitrous oxide	TSP.....	Total Suspended Particulate
NH ₃	Ammonia	VOC	Volatile organic compound
NO ₂	Nitrogen dioxide		
NO _x	Nitrogen oxides		
O ₂	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: Mackin and Son Automotive, Inc.
Applicant Address: 300 SE Hearthwood Boulevard, Vancouver, WA 98684

Facility Name: Mackin's Prairie Auto Body
Facility Address: 11601 NE 126th Street, Vancouver, WA 98662

SWCAA Identification: 2816

Contact Person: Chris Roberts – Director of Operations

Primary Process: Auto Body Shop
SIC/NAICS Code: 7532: Top, Body, and Upholstery Repair Shops and Paint Shops
811121: Automotive Body, Paint, and Interior Repair and Maintenance

Facility Latitude and Longitude: 45° 42' 45.181" N
122° 33' 12.989" W

Facility Classification: Natural Minor

2. FACILITY DESCRIPTION

Mackin's Prairie Auto Body (Mackin's Prairie) proposed to build and operate a new auto body repair and refinishing shop in Vancouver, Washington.

3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit (ADP) application number CL-3280 dated October 29, 2024. Mackin's Prairie submitted ADP application CL-3280 requesting the following:

- Approval of a new auto body refinishing shop

This is the initial permitting action for this facility.

4. PROCESS DESCRIPTION

- 4.a. Vehicle Preparation. Damaged motor vehicles are repaired and surface prepared prior to spray coating. Preparation activities include bodywork, component replacement, application of putty and fillers, and sanding. Minor bodywork and surface preparation are performed throughout the shop area of the building. Particulate emissions are controlled by internally vented air purifiers hanging throughout the shop, as well as two energy recovery ventilator (ERV) units that exhaust to the east end of the building.

- 4.b. Vehicle Spray Coating. Vehicles are refinished with spray coating equipment. All spray coating will take place in a heated spray booth with integral exhaust system. Coatings are applied using HPLV spray guns. Coating transfer efficiency for this equipment is a minimum of 65%. Particulate emissions and overspray are controlled with high efficiency filters.
- 4.c. Paint Mixing Activities. Auto body coatings are prepared in the mix room.

5. EQUIPMENT/ACTIVITY IDENTIFICATION

- 5.a. Spray Booth #1. The following details were provided for the paint booth:

Manufacturer:	Global Finishing Solutions
Model:	PRFDP-271412-BT
Length * width * height:	27' x 14' x 12'
Rated exhaust flow:	15,000 cfm
Outlet filter area:	60 ft ²
Outlet filter manufacturer:	Paint Pocket
Outlet filter model:	POCPPG 3060K1
Outlet filter capture efficiency:	99%
Exhaust description:	34" diameter ~30' above ground level

The unit has a digital pressure display alerting when the filters need replacing. The booth auto adjusts the dampers to create 0.05" of positive pressure.

The facility uses HVLP spray guns with transfer efficiency of 65%. The specific brand will change per project depending on the painting contractors.

The unit has an attached Blowtherm natural gas dryer, rated at 1.5 MMBtu/hr.

- 5.b. Spray Booth #2. The following details were provided for the paint booth:

Manufacturer:	Global Finishing Solutions
Model:	PRFDP-271612-BT
Length * width * height:	27' x 16' x 12'
Rated exhaust flow:	15,000 cfm
Outlet filter area:	60 ft ²
Outlet filter manufacturer:	Paint Pocket
Outlet filter model:	POCPPG 3060K1
Outlet filter capture efficiency:	99%
Exhaust description:	34" diameter ~30' above ground level

The unit has a digital pressure display alerting when the filters need replacing. The booth auto adjusts the dampers to create 0.05" of positive pressure.

The facility uses HVLP spray guns with transfer efficiency of 65%. The specific brand will change per project depending on the painting contractors.

The unit has an attached Garimat natural gas dryer, rated at 1.5 MMBtu/hr.

5.c. Paint Mix Room. The following details were provided for the paint mix room:

Manufacturer: Global Finishing Solutions
 Model: GFS Ultra XD Mix Room
 Length * width * height: 9' x 12' x 9'
 Rated exhaust flow: 949 cfm
 Exhaust description: 14.5" diameter ~30' above ground level

5.d. Equipment/Activity Summary.

ID No.	Equipment/Activity	Control Equipment/Measure
1	Spray Booth #1 - Global Finishing Solutions	Filter bank – high efficiency filter media Ultra-low Sulfur Fuel (Natural Gas)
2	Spray Booth #2 - Global Finishing Solutions	Filter bank – high efficiency filter media Ultra-low Sulfur Fuel (Natural Gas)
3	Paint Mix Room - Global Finishing Solutions	None

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.

Nothing precludes the use, including the exclusive use of any credible evidence or information relevant to identifying or quantifying emissions if methods identified above, in the ADP, or elsewhere in this TSD have not provided adequate quantification of actual emissions.

6.a. Spray Coating Operations. VOC and TAP/HAP emissions are calculated using a mass balance approach, using the facility-wide 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:

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

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 content of the product (this method provides a conservative maximum). Using the solids content of each product, the particulate (PM and PM₁₀) 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 PM₁₀ and PM_{2.5} is assumed to be 78% of the PM/PM₁₀, 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 PM₁₀ and PM_{2.5} can be determined:

$$\begin{aligned}
 10 \text{ gal/yr} \times 7.1 \text{ lb/gal} \times 20\% \times (100\% - 65\%) \times (100\% - 99\%) &= 0.05 \text{ lb/yr PM}_{10} \\
 0.05 \text{ lb/yr PM}_{10} \times 78\% &= 0.04 \text{ lb/yr PM}_{2.5}
 \end{aligned}$$

A list of the products in use, the SDS or TDS, and expected annual usage was provided as part of the ADP application. It is recognized that the actual usage of products will vary. Emission estimates were based on the provided information using the procedures listed above with an estimated increase due to potential business expansion. Emissions are determined to be as follows:

<u>Pollutant</u>	<u>Emissions</u>
VOC	2.00 tpy
PM/PM ₁₀	0.06 tpy
TAP	1.40 tpy
HAP	0.50 tpy

The following is a list of toxic and hazardous air pollutants that the facility proposed. It is understood that as products change the constituents in a product may also change.

TAP	CAS Number	SQER (lb/yr)	Controlled Emissions (lb/yr)
Acetone	67-64-1	43,748	90
Aluminum powder	7429-90-5	175	1
Butyl acetate	123-86-4	43,748	150
n-Butyl alcohol	71-36-3	43,748	25
sec-Butyl alcohol	78-92-2	43,748	40
2-Butoxyethanol	111-76-2	43,748	160
Carbon black	1333-86-4	175	10
Chlorobenzene	108-90-7	22,750	2
Cumene	98-82-8	43,748	2
Diethylene glycol monobutyl ether	112-34-5	--	1
Dipropylene glycol methyl ether (H)	34590-94-8	43,748	1
Ethyl acetate	141-78-6	43,748	1
Ethyl benzene (H)	100-41-4	43,748	15
Ethylene glycol monobutyl ether acetate (H)	112-07-2	--	15
Heptane	142-82-5	43,748	40
1,6-Hexamethyle diisocyanate	822-06-0	175	1
Isobutyl acetate	110-9-0	43,748	4
Isobutyl alcohol	78-83-1	43,748	45
Isopropyl alcohol	67-63-0	43,748	20
Methanol	67-56-1	43,748	200
Methyl acetate	79-20-9	43,748	90
Methyl n-amyl ketone	110-43-0	43,748	65
Methyl ethyl ketone	78-93-3	43,748	10
Methyl isoamyl ketone	110-12-3	43,748	1
n-Propanol	71-23-8	43,748	5
Propylene glycol monomethyl ether (H)	107-98-2	43,748	20
Toluene (H)	108-88-3	43,748	120
Trimethylbenzene	25551-13-7	43,748	1
1,2,4 Trimethylbenzene	95-63-6	43,748	1
1,3,5 Trimethylbenzene	108-67-8	43,748	1
VM&P Naphtha	8032-32-4	43,748	1
Xylene (H)	1330-20-7	43,748	50
Zinc oxide, fume	1314-13-2	1,750	1

(H) Indicates a federal HAP

Actual annual emissions for spray applied coatings are calculated using annual material usage, SDS data, filter efficiencies, and transfer efficiency. Metals and other particulate matter TAPs should be given a control efficiency due to the use of the filters.

- 6.b. Spray Booth #1 Heater. Potential annual emissions from the combustion of natural gas in the booth heater were calculated with the assumption that the equipment will operate at full rated capacity for 8,760 hours per year. Emissions of NO_x, CO, VOC, SO₂, PM/PM₁₀/PM_{2.5}, 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 PM₁₀/PM_{2.5}.

Spray Booth #1 Heater						
Combined Heat Input Rating =		1.500	MMBtu/hr			
Natural Gas Geat Content =		1,020	Btu/scf (for criteria pollutant emission factors)			
Natural Gas Heat Content =		1,028	Btu/scf (for 40 CFR 98 GHG emission factors)			
Annual Fuel Consumption =		13,140	MMBtu/yr			
Pollutant	Emission Factor lb/MMBtu	Emissions lb/hr	Emissions lb/yr	Emissions tpy	Emission Factor Source	
NO _x	0.0980	0.15	1,288	0.64	AP-42 Sec. 1.4 (7/98)	
CO	0.0824	0.124	1,082	0.54	AP-42 Sec. 1.4 (7/98)	
VOC	0.0054	0.008	71	0.035	AP-42 Sec. 1.4 (7/98)	
SO _x as SO ₂	0.0006	8.8E-04	8	0.0039	AP-42 Sec. 1.4 (7/98)	
PM (total)	0.0075	0.011	98	0.049	AP-42 Sec. 1.4 (7/98)	
PM ₁₀	0.0075	0.011	98	0.049	AP-42 Sec. 1.4 (7/98)	
PM _{2.5}	0.0075	0.011	98	0.049	AP-42 Sec. 1.4 (7/98)	
Benzene	2.06E-06	3.1E-06	2.7E-02	1.4E-05	AP-42 Sec. 1.4 (7/98)	
Formaldehyde	7.35E-05	1.1E-04	9.7E-01	4.8E-04	AP-42 Sec. 1.4 (7/98)	
Greenhouse Gases	kg/MMBtu	GWP	lb/MMBtu	lb/MMscf	tpy, CO ₂ e	Emission Factor Source
CO ₂	53.06	1	116.98	120,253	769	40 CFR 98
CH ₄	0.001	25	0.055	56.66	0.36	40 CFR 98
N ₂ O	0.0001	298	0.066	67.54	0.43	40 CFR 98
Total GHG - CO ₂ e	53.0611		117.098	120,377	769	

- 6.c. Spray Booth #2 Heater. Potential annual emissions from the combustion of natural gas in the booth heater were calculated with the assumption that the equipment will operate at full rated capacity for 8,760 hours per year. Emissions of NO_x, CO, VOC, SO₂, PM/PM₁₀/PM_{2.5}, 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 PM₁₀/PM_{2.5}.

Spray Booth #2 Heater						
Combined Heat Input Rating =		1,500 MMBtu/hr				
Natural Gas Geat Content =		1,020 Btu/scf (for criteria pollutant emission factors)				
Natural Gas Heat Content =		1,028 Btu/scf (for 40 CFR 98 GHG emission factors)				
Annual Fuel Consumption =		13,140 MMBtu/yr				
	Emission Factor	Emissions	Emissions	Emissions		
Pollutant	lb/MMBtu	lb/hr	lb/yr	tpy	Emission Factor Source	
NO _x	0.0980	0.15	1,288	0.64	AP-42 Sec. 1.4 (7/98)	
CO	0.0824	0.124	1,082	0.54	AP-42 Sec. 1.4 (7/98)	
VOC	0.0054	0.008	71	0.035	AP-42 Sec. 1.4 (7/98)	
SO _x as SO ₂	0.0006	8.8E-04	8	0.0039	AP-42 Sec. 1.4 (7/98)	
PM (total)	0.0075	0.011	98	0.049	AP-42 Sec. 1.4 (7/98)	
PM ₁₀	0.0075	0.011	98	0.049	AP-42 Sec. 1.4 (7/98)	
PM _{2.5}	0.0075	0.011	98	0.05	AP-42 Sec. 1.4 (7/98)	
Benzene	2.06E-06	3.1E-06	2.7E-02	1.4E-05	AP-42 Sec. 1.4 (7/98)	
Formaldehyde	7.35E-05	1.1E-04	9.7E-01	4.8E-04	AP-42 Sec. 1.4 (7/98)	
					Emission Factor	
Greenhouse Gases	kg/MMBtu	GWP	lb/MMBtu	lb/MMscf	tpy, CO ₂ e	Source
CO ₂	53.06	1	116.98	120,253	769	40 CFR 98
CH ₄	0.001	25	0.055	56.66	0.36	40 CFR 98
N ₂ O	0.0001	298	0.066	67.54	0.43	40 CFR 98
Total GHG - CO ₂ e	53.0611		117.098	120,377	769	

6.d. Emissions Summary

Air Pollutant	Potential to Emit (tpy)	Project Impact (tpy)
NO _x	1.29	1.29
CO	1.08	1.08
VOC	2.07	2.07
SO ₂	0.01	0.01
PM	0.16	0.16
PM ₁₀	0.16	0.16
PM _{2.5}	0.16	0.16
CO ₂ /CO ₂ e	1,539	1,539
TAP	1.40	1.40
HAP	0.50	0.50

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. 40 CFR 63.11169 et seq. (Subpart HHHHHH) "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, auto body refinishing operations, or spray coating operations that coat metal or plastic parts with coatings containing target HAPs (chromium, lead, manganese, nickel, or cadmium). This facility applies spray coatings to metal parts, but none of the coatings contain target HAPs so the regulation is not applicable to this facility.
- 7.b. 40 CFR 63.11514 et seq. (Subpart XXXXXX) "National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories" establishes standards and work practices for dry abrasive blasting, machining, dry grinding and polishing, spray painting, and welding operations at area sources primarily engaged in one of nine selected metal fabrication and finishing source categories. This facility does not fall under one of the source categories, therefore it does not apply to this facility.
- 7.c. 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. This law applies to the facility.
- 7.d. 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. This law applies to the facility.
- 7.e. Washington Administrative Code (WAC) 173-460 "Controls for New Sources of Toxic Air Pollutants" requires BACT for toxic air pollutants (T-BACT), identification and quantification of emissions of toxic air pollutants, and demonstration of protection of

human health and safety. The facility emits TAPs; therefore, this regulation applies to the facility.

- 7.f. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM₁₀, PM_{2.5}, lead, SO₂, NO_x, ozone, and CO in the ambient air, which must not be exceeded. The facility emits PM₁₀, PM_{2.5}, SO_x, NO_x, and CO; therefore, certain sections of this regulation apply. The facility does not emit lead; therefore, the lead regulation section does not apply.
- 7.g. 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, SO₂, concealment and masking, and fugitive dust. This regulation applies to the facility.
- 7.h. 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. This regulation applies to the facility.
- 7.i. 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. This regulation applies to the facility.
- 7.j. SWCAA 400-040(3) "Fugitive Emissions" requires that reasonable precautions be taken to prevent the fugitive release of air contaminants to the atmosphere. This regulation applies to the facility.
- 7.k. 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. This regulation applies to the facility.
- 7.l. SWCAA 400-040(6) "Sulfur Dioxide" requires that no person is allowed to emit a gas containing in excess of 1,000 ppm of SO₂, corrected to 7% O₂ or 12% CO₂ as required by the applicable emission standard for combustion sources. The facility emits SO₂; therefore, this regulation applies to the facility.
- 7.m. SWCAA 400-040(8) "Fugitive Dust Sources" requires that reasonable precautions be taken to prevent fugitive dust from becoming airborne and to minimize emissions. This regulation applies to the facility.
- 7.n. 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/Nm³_{dry} (0.1 gr/dscf) of exhaust gas at standard conditions. The facility has combustion units; therefore, this regulation applies to the facility.

- 7.o. 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/Nm³_{dry} (0.1 gr/dscf) of exhaust gas. The facility has general process units; therefore, this regulation applies to the facility.
- 7.p. 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. This regulation applies to the facility.
- 7.q. 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. The new units meet the definition of a new source; therefore, this regulation applies to the facility.
- 7.r. SWCAA 400-111 "Requirements for Sources in a Maintenance Plan Area" 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) Emissions will be minimized to the extent that the new source will not exceed emission levels or other requirements provided in the maintenance plan;
 - (3) BACT will be employed for all air contaminants to be emitted by the proposed equipment;
 - (4) The proposed equipment will not cause any ambient air quality standard to be exceeded; and
 - (5) 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.

The facility is located in a maintenance plan area; therefore, this regulation applies to the facility.

- 7.s. 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 490-205 "Surface Coating of Miscellaneous Metal Parts and Products" specifically is not applicable to automobile refinishing, therefore, the standards in this section do not apply to the permittee.

- 7.t. SWCAA 493-400 "Motor Vehicle Refinishing" establishes VOC content limits for motor vehicle refinishing coatings. This regulation is applicable to this facility because it paints vehicles and vehicle parts. This is a point-of-sale regulation.

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 Booths. The use of enclosed spray booths equipped with arrestors with a minimum of 98% capture efficiency and high transfer efficiency coating equipment (e.g., air assisted airless, airless, and HVLP) has been determined to meet the requirements of BACT for the types and quantities of emissions from the spray booth.

For the booth heater, the use of ultra-low-sulfur fuel (natural gas) and proper combustion controls meets the requirements of BACT for the types and quantities of emissions from the spray booth heater.

- 8.b. 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.c. 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_x, CO, PM, VOC (as a precursor to O₃), and SO₂ are emitted at levels where no significant adverse ambient air quality impact is anticipated.
- 9.b. Toxic Air Pollutant Review. The equipment proposed in ADP application CL-3280 will not affect the type or quantity of TAP emissions from the auto body facility. Approved BACT measures at the facility will limit emissions of Class A and B toxic air pollutants to below the applicable Small Quantity Emission Rates (SQER) or Acceptable Source Impact Level (ASILs) specified in WAC 173-460.

Conclusions

- 9.c. The new auto body facility, as proposed in ADP application CL-3280, 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. The new auto body facility, as proposed in ADP application CL-3280, 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 new auto body facility, as proposed in ADP application CL-3280, 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 24-3678 in response to ADP application CL-3280. ADP 24-3678 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. Emission Limits. Facility-wide emission limits for approved equipment are based on the maximum potential emissions calculated in Section 6 of this TSD, except for limits established for the paint booth. The limit for the paint booth has been based on higher throughputs than provided in the permit application to provide for reasonable expansion of the facility operations.

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

- 10.b. Operational Limits and Requirements. 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.

Because emissions from the booth heaters were reviewed only for the scenario where the units are fired on natural gas, operation of the units on other potentially higher emitting fuels was prohibited.

- 10.c. Monitoring, Recordkeeping, and Reporting Requirements. Sufficient reporting and recordkeeping were established to document compliance with the established emission limits, provide for general requirements (upset 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.

Digital records for the Global Finishing Solutions spray booths indicating filter replacement and/or differential pressure must be available for review.

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 start-up 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

No emission monitoring or testing requirements were established as part of this permitting action.

13. FACILITY HISTORY

- 13.a. General History. The facility has not been permitted in the past.

14. PUBLIC INVOLVEMENT OPPORTUNITY

- 14.a. Public Notice for ADP Application CL-3280. Public notice for ADP application CL-3280 was published on the SWCAA website for a minimum of fifteen (15) days beginning on October 31, 2024.

- 14.b. Public/Applicant Comment for ADP Application CL-3280. SWCAA did not receive specific comments, a comment period request, or any other inquiry from the public or the applicant regarding ADP application CL-3280. 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 24-048. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c).