

## TECHNICAL SUPPORT DOCUMENT

Air Discharge Permit ADP 24-3669 Air Discharge Permit Application CL-3268

Issued: November 6, 2024

C-Tran

**SWCAA ID - 157** 

Prepared By: Wess Safford

Air Quality Engineer

Southwest Clean Air Agency

# TABLE OF CONTENTS

| Section | <u>1</u>  | Page |
|---------|---|------|
| 1.      | Facility Identification   | 1    |
| 2.      | Facility Description  | 1    |
| 3.      | Current Permitting Action   | 1    |
| 4.      | Process Description   | 1    |
| 5.      | Equipment/Activity Identification   | 2    |
| 6.      | Emissions Determination   | 3    |
| 7.      | Regulations and Emission Standards  | 7    |
| 8.      | RACT/BACT/BART/LAER/PSD/CAM Determinations  | 9    |
| 9.      | Ambient Impact Analysis   | 9    |
| 10.     | Discussion of Approval Conditions   | 10   |
| 11.     | Start-up and Shutdown Provisions/Alternative Operating Scenarios/Pollution Prevention | 10   |
| 12.     | Emission Monitoring and Testing   | 11   |
| 13.     | Facility History  | 11   |
| 14.     | Public Involvement Opportunity  | 11   |

## **ABBREVIATIONS**

## List of Acronyms

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

# List of Units and Measures

| μm      | Micrometer ( $10^{-6}$ meter)     | MMBtu | Million British thermal unit     |
|---------|-----------------------------------|-------|----------------------------------|
| acfm    | Actual cubic foot per minute      | ppm   | Parts per million                |
| bhp     | Brake horsepower                  | 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                        | scfm  | Standard cubic foot per minute   |
| hp-hr   | Horsepower-hour                   | tpy   | Tons per year                    |
| kW      | Kilowatt                          |       |                                  |

## List of Chemical Symbols, Formulas, and Pollutants

| CO      | Carbon monoxide                         | $PM_{10}$       | PM with an aerodynamic diameter |
|---------|---|-----------------|---------------------------------|
| $CO_2$  | Carbon dioxide                          |                 | 10 μm or less                   |
| $CO_2e$ | Carbon dioxide equivalent               | $PM_{2.5}$      | PM with an aerodynamic diameter |
| HAP     | Hazardous air pollutant listed pursuant |                 | 2.5 μm or less                  |
|         | to Section 112 of the Federal Clean     | $\mathrm{SO}_2$ | Sulfur dioxide                  |
|         | Air Act                                 | TAP             | Toxic air pollutant pursuant to |
| $NO_x$  | Nitrogen oxides                         |                 | Chapter 173-460 WAC             |
| $O_2$   | Oxygen                                  | VOC             | Volatile organic compound       |
| $O_3$   | Ozone                                   |                 |                                 |
| PM      | Particulate Matter with an              |                 |                                 |
|         | aerodynamic diameter 100 µm or less     |                 |                                 |

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: C-Tran

Applicant Address: 10600 NE 51st Circle, Vancouver, Washington 98682

Facility Name: C-Tran

Facility Address: 2425 NE 65th Avenue, Vancouver, Washington 98661

SWCAA Identification: 157

Contact Person: John Dailey, Director of Maintenance

Primary Process: Public Transportation

SIC/NAICS Code: 4111 / Local & Suburban Transit

485210 / Interurban and Rural Bus Transportation

Facility Latitude and 45° 38' 19.64" N Longitude 122° 36' 10.83" W

Facility Classification: Natural Minor

#### 2. FACILITY DESCRIPTION

C-Tran operates the public bus system for Vancouver, Camas, Washougal, Battle Ground, Ridgefield, La Center and Yacolt. This facility is a C-Tran operations and maintenance facility located at 2425 NE 65<sup>th</sup> Avenue in Vancouver, Washington.

#### 3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit application number CL-3268 (ADP Application CL-3268) dated March 18, 2024. C-Tran submitted ADP Application CL-3268 requesting approval of an expanded operations and maintenance facility. The facility operates the following equipment:

- One Rohner model IDD-FP-20-16-73-CP spray booth;
- One 750 kW Kohler diesel fired emergency generator;
- One 150 kW Kohler diesel fired emergency generator;
- One Landa natural gas fired pressure washer;
- One gasoline dispensing station; and
- One central vacuum system.

The current permitting action provides approval for the maintenance depot equipment proposed in ADP Application CL-3268. ADP 24-3669 will supersede ADP 83-712 and ADP 83-693 in their entirety.

#### 4. PROCESS DESCRIPTION

- 4.a. <u>Spray Coating.</u> A single commercial downdraft spray booth is used to repair and repaint buses and other transportation equipment. Spray coatings are stored and mixed in a dedicated mix room. Paint and thinner waste is stored in drums prior to shipment offsite. Spray coatings are applied using High Volume Low Pressure (HVLP) spray guns. Overspray from spray coating operations is controlled with booth enclosure and filter media installed in the booth's exhaust plenum.
- 4.b. <u>Emergency Power Generation.</u> Two diesel engine driven generators are used to provide electrical power at the facility during interruption of utility power.

4.c. <u>Gasoline Dispensing.</u> This facility receives unleaded gasoline from tanker trucks for storage in one underground storage tank. The gasoline storage tank is equipped with a two-point vapor balance system (Stage I vapor recovery). Gasoline is dispensed to vehicles from a single dispenser without vapor control.

### 5. EQUIPMENT/ACTIVITY IDENTIFICATION

5.a. Rohner Spray Booth (new). This unit is a fully enclosed downdraft spray booth used to repair and repaint buses and other transportation equipment. The booth is equipped with a natural gas fired heater. Overspray emissions are controlled with process enclosure and filter media.

Booth Make / Model: Rohner / IDD-FP-20-16-73-CP Booth Dimensions: 74' long x 20' wide x 19' 10" high

Exhaust Rate: 73,000 acfm total

(4) Greenheck TBI-CA-3H42-100 axial fans @ 18,250 acfm each

Filtration Media: Air Flow Technology / AFR-1 (overall capture efficiency 98.8%)

Booth Heater Make / Model: Titan / TA-133NG HRD HOT (s/n 16067)

Booth Heater Rated Capacity: 2.81 MMBtu/hr Booth Heater Fuel Type: Natural Gas

Exhaust Stack: (4) 42" dia stacks, vertical at 33' 6" above ground level, 7' 6" above roof level

Location: 45°38'16.36"N 122°36'12.47"W

5.b. <u>Diesel Engine – Kohler 750 Emergency Generator (new).</u> This unit is a diesel fired generator used to provide electrical power to essential facility systems during interruptions in utility power.

Make / Model: Mitsubishi / S12A2-YY2PTAW-2 (s/n 30852)

Power Rating: 1,200 bhp
Fuel Type: Diesel
Fuel Consumption: 61.4 gal/hr
Model Year: 2023
EPA Certification: Tier II
NSPS/MACT Applicable: IIII / ZZZZ

Generator Make / Model: Kohler / 750 REOMZD

Generator Power Rating: 750 kW

Exhaust: 12" diameter, vertical at ~9.8' above ground level

Location: 45°38'20.31"N 122°36'16.67"W

5.c. <u>Diesel Engine – Kohler 150 Emergency Generator (new).</u> This unit is a diesel fired generator used to provide electrical power to the fueling islands during interruptions in utility power.

Make / Model: John Deere / 6068HF285K (s/n PE6068L224814)

Power Rating: 237 bhp Fuel Type: Diesel

Fuel Consumption: 12.1 gal/hr (estimated)

Model Year: 2012 EPA Certification: Tier 3 NSPS/MACT Applicable: IIII / ZZZZ

Generator Make / Model: Kohler / 150REOZJF

Generator Power Rating: 150 kW

Exhaust: 3" diameter, vertical at 5' above ground level

Location: 45°38'19.20"N 122°36'6.98"W

5.d. <u>Insignificant Emission Units.</u> The following pieces of facility equipment have been determined to have insignificant emissions, and are not registered as emission units:

<u>Landa Pressure Washer</u>. This unit is a natural gas fired pressure washer used to clean buses and other transportation equipment.

Make / Model: Landa / VHG4-30024A (s/n 11095410-164345)

Rated Heat Input: 0.4 MMBtu/hr Fuel Type: Natural gas

Exhaust: 8" dia at 20' above ground level Location: 45°38'21.35"N 122°36'6.83"W

<u>DeVilbiss Spray Booth.</u> This unit is a three sided side-draft spray booth used to perform small maintenance and repair activities. Overspray is controlled with process enclosure and filter media.

<u>Gasoline Dispensing Station.</u> C-Tran uses a single dispenser and associated underground storage tank to refuel gasoline powered transportation equipment at the facility.

Location: 45°38'19.20"N 122°36'6.98"W

<u>Central Vacuum System.</u> This unit is a central vacuum system used for cleaning in the maintenance bays. The system vents to a single dust collector located outside of the building.

Make/Model: Dustcontrol / VPMOD-25XL

Exhaust: 3" dia, radial at ~8' above ground level Location: 45°38'16.99"N 122°36'12.09"W

### 5.e. <u>Equipment/Activity Summary.</u>

| ID<br>No. | Equipment/Activity                                     | Control Equipment/Measure                                     |
|-----------|--|---|
| 1         | Rohner Spray Booth (73,000 acfm)                       | Process Enclosure, High Efficiency Filtration                 |
| 2         | Diesel Engine – Kohler 750<br>(Mitsubishi – 1,200 bhp) | EPA Tier Certification,<br>Low sulfur diesel (≤0.0015% by wt) |
| 3         | Diesel Engine – Kohler 150<br>(John Deere – 237 bhp)   | EPA Tier Certification,<br>Low sulfur diesel (≤0.0015% by wt) |

#### 6. EMISSIONS DETERMINATION

Emissions to the ambient atmosphere from operations proposed in ADP Application CL-3268 consist of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), toxic air pollutants (TAPs), and hazardous air pollutants (HAPs).

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. <u>Spray Coating Operations.</u> Potential emissions from spray coating operations were calculated based on maximum proposed coating throughput using material balance methodology and SDS information for each individual coating product. It was assumed that 100% of the volatile material from the coatings is emitted to the ambient air. Particulate matter emission calculations assume a 65% transfer efficiency, 50% solids content, and 98% filtration efficiency. PM is assumed to be 100% PM<sub>10</sub> and 78% PM<sub>2.5</sub>. Annual emissions will be calculated based on actual material usage using the same methodology.

| Pollutant         | <b>Emissions (tpy)</b> |
|-------------------|------------------------|
| VOC               | 1.00                   |
| $PM/PM_{10}$      | 0.005                  |
| PM <sub>2.5</sub> | 0.004                  |
| HAP               | 0.49                   |
| TAP               | 0.81                   |

6.b. Rohner Spray Booth Heater. Potential emissions from booth heater operation are calculated from a rated heat input of 2.81 MMBtu/hr, 8,760 hr/yr of operation, and emission factors are taken from EPA AP-42 §1.4 "Natural Gas Combustion" (3/98). All PM is assumed to be PM<sub>2.5</sub>. Annual emissions will be calculated based on actual fuel consumption using the same methodology.

| Heat Input Rating =                | 2.810           | MMBtu/hr |           |         |
|------------------------------------|-----------------|----------|-----------|---------|
| Gas Heat Content =                 | 1,020           | Btu/scf  |           |         |
| Fuel Consumption =                 | 24,616          | MMBtu/yr |           |         |
|                                    |                 |          |           |         |
|                                    | Emission Factor |          | Emissions |         |
| Pollutant                          | (lb/MMBtu)      | (lb/hr)  | (lb/yr)   | (tpy)   |
| $NO_X$                             | 0.0980          | 0.28     | 2,413     | 1.21    |
| CO                                 | 0.0824          | 0.23     | 2,027     | 1.01    |
| VOC                                | 0.0054          | 0.015    | 133       | 0.066   |
| SO <sub>X</sub> as SO <sub>2</sub> | 5.88E-04        | 0.0017   | 14        | 0.0072  |
| PM (total)                         | 0.0075          | 0.021    | 183       | 0.092   |
| $PM_{10}$                          | 0.0075          | 0.021    | 183       | 0.092   |
| $PM_{2.5}$                         | 0.0075          | 0.021    | 183       | 0.092   |
| Benzene                            | 2.06E-06        | 5.8E-06  | 5.1E-02   | 2.5E-05 |
| Formaldehyde                       | 7.35E-05        | 2.1E-04  | 1.8E+00   | 9.0E-04 |
|                                    |                 |          |           |         |
| CO <sub>2</sub> e                  | 117.098         | 329.0    | 2,882,438 | 1,441   |

6.c. <u>Diesel Engine – Kohler 750.</u> Potential emissions from engine operation are calculated based on 200 hr/yr of operation at full rated load and the use of ultra-low sulfur diesel (<0.0015% sulfur by weight). Sulfur oxide emissions are estimated using mass balance methodology, assuming all fuel sulfur is converted to sulfur dioxide. Annual emissions will be calculated from actual hours of operation using the same methodology.

| Operation =                            | 200          | hr/yr           |                  |              |           |
|--|--------------|-----------------|------------------|--------------|-----------|
| Power Output =                         | 1,200        | horsepower      | •                |              |           |
| Fuel Sulfur Content =                  | 0.0015       | % by weigh      | nt               |              |           |
| Fuel Consumption Rate =                | 61.40        | gal/hr          |                  |              |           |
| Fuel Heat Content =                    | 0.138        | MMBtu/gal       | (40 CFR 98       | )            |           |
|  |              |                 |                  |              |           |
|  | Emis         | sions           |                  |              |           |
| <u>Pollutant</u>                       | <u>lb/hr</u> | <u>tpy</u>      | EF Source        |              |           |
| $NO_X$                                 | 10.95        | 1.09            | EPA Certifi      | ication Data |           |
| СО                                     | 1.18         | 0.12            | EPA Certifi      | ication Data |           |
| VOC                                    | 0.45         | 0.045           | EPA Certifi      | ication Data |           |
| SO <sub>X</sub> as SO <sub>2</sub>     | 0.013        | 0.0013          | Mass Balan       | ice          |           |
| PM/PM <sub>10</sub> /PM <sub>2.5</sub> | 0.28         | 0.028           | EPA Certifi      | ication Data |           |
| DPM                                    |              | 0.028           | DPM = PM         | [            |           |
|  |              |                 |                  |              |           |
|  |              | EF              |                  | Emissions    |           |
|  | kg/MMBtu     | <u>lb/MMBtu</u> | <u>lb/gallon</u> | <u>tpy</u>   |           |
| CO <sub>2</sub> e                      | 73.9636      | 163.61          | 22.58            | 138.6        | 40 CFR 98 |

6.d. <u>Diesel Engine – Kohler 150.</u> Potential emissions from engine operation are calculated based on 200 hr/yr of operation at full rated load and the use of ultra-low sulfur diesel (<0.0015% sulfur by weight). Sulfur oxide emissions are estimated using mass balance methodology, assuming all fuel sulfur is converted to sulfur dioxide. Annual emissions will be calculated from actual hours of operation using the same methodology.

| Operation =                        | 200          | hr/yr      |                  |             |           |
|------------------------------------|--------------|------------|------------------|-------------|-----------|
| Power Output =                     | 237          | horsepower | •                |             |           |
| Fuel Sulfur Content =              | 0.0015       | % by weigh | nt               |             |           |
| Fuel Consumption Rate =            | 12.10        | gal/hr     |                  |             |           |
| Fuel Heat Content =                | 0.138        | MMBtu/gal  | (40 CFR 98       | )           |           |
|                                    |              |            |                  |             |           |
|                                    | Emis         | sions      |                  |             |           |
| <u>Pollutant</u>                   | <u>lb/hr</u> | <u>tpy</u> | EF Source        |             |           |
| $NO_X$                             | 1.48         | 0.15       | EPA Certifi      | cation Data |           |
| CO                                 | 0.47         | 0.047      | EPA Certifi      | cation Data |           |
| VOC                                | 0.047        | 0.0047     | EPA Certifi      | cation Data |           |
| SO <sub>X</sub> as SO <sub>2</sub> | 0.0026       | 0.00026    | Mass Balan       | ce          |           |
| $PM/PM_{10}/PM_{2.5}$              | 0.047        | 0.0047     | EPA Certifi      | cation Data |           |
| DPM                                |              | 0.0047     | DPM = PM         |             |           |
|                                    |              |            |                  |             |           |
|                                    |              | EF         |                  | Emissions   |           |
|                                    | kg/MMBtu     | lb/MMBtu   | <u>lb/gallon</u> | <u>tpy</u>  |           |
| CO <sub>2</sub> e                  | 73.9636      | 163.61     | 22.58            | 27.3        | 40 CFR 98 |

6.e. <u>Emissions Summary/Facility-wide Potential to Emit.</u> Facility-wide potential to emit as calculated in the sections above is summarized below.

| <u>Pollutant</u> | Potential Emissions (tpy) | Project Increase (tpy) |
|------------------|---------------------------|------------------------|
| $NO_X$           | 2.45                      | 2.45                   |
| CO               | 1.18                      | 1.18                   |
| VOC              | 1.12                      | 1.12                   |
| $SO_2$           | 0.0088                    | 0.0088                 |
| Lead             | 0.0                       | 0.0                    |
| PM               | 0.13                      | 0.13                   |
| $PM_{10}$        | 0.13                      | 0.13                   |
| $PM_{2.5}$       | 0.13                      | 0.13                   |
| TAP              | 0.84                      | 0.84                   |
| HAP              | 0.49                      | 0.49                   |
|                  |                           |                        |
| $CO_2e$          | 1,607                     | 1,607                  |

| Pollutant                            | CAS<br>Number | Category | Facility-wide<br>Emissions | Project<br>Increase | WAC 173-460<br>SQER |
|--------------------------------------|---------------|----------|----------------------------|---------------------|---------------------|
|                                      |               |          | 11. /                      | 11. /               | 11. /               |
|                                      |               |          | <u>lb/yr</u>               | <u>lb/yr</u>        | <u>lb/yr</u>        |
| Acetone                              | 67-64-1       | TAP      | 91.1                       | 91.1                | 43,748              |
| Benzene                              | 71-43-2       | HAP/TAP  | 0.05                       | 0.05                | 20                  |
| n-Butyl Acetate                      | 123-86-4      | TAP      | 242.5                      | 242.5               | 43,748              |
| n-Butyl Alcohol                      | 71-36-3       | TAP      | 9.3                        | 9.3                 | 43,748              |
| Carbon Black                         | 1333-86-4     | HAP/TAP  | 0.05                       | 0.05                | 1,750               |
| Diesel Particulate<br>Matter         |               | TAP      | 64.6                       | 64.6                | 0.54                |
| Diisobutyl Ketone                    | 108-83-8      | TAP      | 0.3                        | 0.3                 | 43,748              |
| Ethyl Acetate                        | 141-78-6      | TAP      | 29.6                       | 29.6                | 43,748              |
| Ethylbenzene                         | 100-41-4      | HAP/TAP  | 32.6                       | 32.6                | 65                  |
| Formaldehyde                         | 50-00-0       | HAP/TAP  | 1.8                        | 1.8                 | 20                  |
| Heptane                              | 142-82-5      | TAP      | 0.1                        | 0.1                 | 43,748              |
| Isobutyl Acetate                     | 110-19-0      | TAP      | 4.1                        | 4.1                 | 43,748              |
| Isobutyl Alcohol                     | 78-83-1       | TAP      | 9.7                        | 9.7                 | 43,748              |
| Isopropyl Alcohol                    | 67-63-0       | TAP      | 23.1                       | 23.1                | 43,748              |
| Methanol                             | 67-56-1       | HAP/TAP  | 126.0                      | 126.0               | 43,748              |
| Methyl n-Amyl Ketone                 | 110-43-0      | TAP      | 247.2                      | 247.2               | 43,748              |
| Methyl Ethyl Ketone                  | 78-93-3       | HAP/TAP  | 0.7                        | 0.7                 | 43,748              |
| Methyl Isobutyl Ketone               | 108-10-1      | HAP/TAP  | 244.0                      | 244.0               | 43,748              |
| Octane                               | 111-65-9      | TAP      | 0.1                        | 0.1                 | 43,748              |
| Propylene Glycol<br>Monomethyl Ether | 107-98-2      | HAP/TAP  | 61.6                       | 61.6                | 43,748              |

| Pollutant                     | CAS<br>Number | Category | Facility-wide<br>Emissions | Project<br>Increase | WAC 173-460<br>SQER |
|-------------------------------|---------------|----------|----------------------------|---------------------|---------------------|
|                               |               |          | <u>lb/yr</u>               | <u>lb/yr</u>        | <u>lb/yr</u>        |
| Toluene                       | 108-88-3      | HAP/TAP  | 378.5                      | 378.5               | 43,748              |
| Trimethylbenzene              | 25551-13-7    | TAP      | 15.1                       | 15.1                | 43,748              |
| VM&P Naphtha                  | 8032-32-4     | TAP      | 50.0                       | 50.0                | 43,748              |
|                               |               |          |                            |                     |                     |
|                               |               |          | <u>lb/24-hr</u>            | <u>lb/24-hr</u>     | <u>lb/24-hr</u>     |
| 2-Butoxyethanol               | 111-76-2      | HAP/TAP  | 0.3                        | 0.3                 | 6.1                 |
| Cumene                        | 98-82-8       | HAP/TAP  | 0.001                      | 0.001               | 30                  |
| Cyclohexane                   | 110-82-7      | TAP      | 0.02                       | 0.02                | 440                 |
| Hexamethylene<br>Diisocyanate | 822-06-0      | HAP/TAP  | 0.0003                     | 0.0003              | 0.0052              |
| Styrene                       | 100-42-5      | HAP/TAP  | 0.0008                     | 0.0008              | 65                  |
| Xylenes                       | 1330-20-7     | HAP/TAP  | 0.4                        | 0.4                 | 16                  |

#### 7. REGULATIONS AND EMISSION STANDARDS

Regulations 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 regulations, codes, or requirements listed below.

- 7.a. 40 CFR 60.4200 et seq. (Subpart IIII) "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to each compression ignition (CI) internal combustion engine (ICE) that commences construction after July 11, 2005 and is manufactured after April 1, 2006, or that is modified or reconstructed after July 11, 2005. This regulation is applicable to the diesel engines that power the emergency generators.
- 7.b. 40 CFR 63 Subpart ZZZZ (63.6580 et seq.) "National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines" establishes national emission limitations and operating limitations for HAP emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This regulation is applicable to all stationary engines at the facility. The units comply by meeting the performance standards of NSPS Subpart IIII.
- 7.c. <u>Title 40 Code of Federal Regulations (CFR) Part 63 Subpart HHHHHHH—"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 applies spray coatings to metal parts, but none of the coatings contain target HAPs so the regulation is not applicable to this facility.</u>
- 7.d. <u>Title 40 CFR 63 Subpart XXXXXX "National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories"</u> establishes standards and work practices for nine metal fabrication and finishing sources engaged in operations that use materials that contain or have the potential to emit chromium, lead, manganese, nickel, or cadmium. This facility does not fall into one of the affected categories and is not subject to the regulation.
- 7.e. 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 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.f. <u>RCW 70A.15.2210</u> 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 Air Discharge Permit for installation and establishment of an air contaminant source.
- 7.g. 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.h. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM<sub>10</sub>, PM<sub>2.5</sub>, lead, sulfur dioxide, nitrogen dioxide, ozone, and carbon monoxide in the ambient air, which shall not be exceeded.
- 7.i. 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, sulfur dioxide, concealment and masking, and fugitive dust.
- 7.j. SWCAA 400-050 "Emission Standards for Combustion and Incineration Units" requires that all provisions of SWCAA 400-040 be met and that no person shall cause or permit the emission of particulate matter from any combustion or incineration unit in excess of 0.23 grams per dry cubic meter (0.1 grains per dry standard cubic foot) of exhaust gas at standard conditions.
- 7.k. SWCAA 400-060 "Emission Standards for General Process Units" prohibits particulate matter emissions from all new and existing process units in excess of 0.1 grains per dry standard cubic foot of exhaust gas.
- 7.1. SWCAA 400-109 "Air Discharge Permit Applications" requires that an Air Discharge Permit 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 Air Discharge Permit application to request such changes. An Air Discharge Permit 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.m. <u>SWCAA 400-110 "New Source Review"</u> requires that SWCAA issue an Air Discharge Permit in response to an Air Discharge Permit application prior to establishment of the new source, emission unit, or modification.
- 7.n. <u>SWCAA 400-111 "Requirements for Sources in a Maintenance Plan Area"</u> requires that no approval to construct or alter an air contaminant source shall 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) Best Available Control Technology 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.

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

The proposed equipment and control systems incorporate Best Available Control Technology (BACT) for the types and amounts of air contaminants emitted by the processes as described below:

#### New BACT Determinations

- 8.a. <u>BACT Determination Spray Coating.</u> The use of complete enclosure (spray booth), high efficiency particulate matter filtration, high transfer efficiency spray coating equipment, and vertical atmospheric dispersion of exhaust streams has been determined to meet the requirements of BACT for spray coating at this facility.
- 8.b. <u>BACT Determination Spray Booth Heater.</u> The use of combustion equipment that fires low sulfur fuel (natural gas) and limits visible emissions to 0% opacity or less has been determined to meet the requirements of BACT for booth heaters at this facility.
- 8.c. <u>BACT Determination Emergency Generator.</u> The use of a modern diesel engine design, limited hours of operation (testing, maintenance, and emergency use only), and ultra-low sulfur distillate fuel (less than 0.0015% sulfur by weight) has been determined to meet the requirements of BACT for emergency generators at this facility.

#### Other Determinations

- 8.d. <u>Prevention of Significant Deterioration (PSD) Applicability Determination.</u> The potential to emit of this facility is less than applicable PSD applicability thresholds. Likewise, 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. <u>Compliance Assurance Monitoring (CAM) Applicability Determination.</u> 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 permit.

### 9. AMBIENT IMPACT ANALYSIS

9.a. <u>TAP Small Quantity Review.</u> The incremental increases in TAP emissions associated with this permitting action are quantified in Section 6 of this Technical Support Document. All incremental increases in individual TAP emissions are less than the applicable small quantity emission rate (SQER) identified in WAC 173-460 with the exception of diesel particulate matter (DPM). Consistent with WAC 173-400-930, emergency engine installations with less than 2,000 horsepower aggregate capacity are presumed to comply with applicable standards.

#### Conclusions

- 9.b. Expansion of the operations and maintenance facility, as proposed in ADP Application CL-3268, will not cause the ambient air quality requirements of Title 40 Code of Federal Regulations (CFR) Part 50 "National Primary and Secondary Ambient Air Quality Standards" to be violated.
- 9.c. Expansion of the operations and maintenance facility, as proposed in ADP Application CL-3268, 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.d. Expansion of the operations and maintenance facility, as proposed in ADP Application CL-3268, will not cause a violation of 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 24-3669 in response to ADP Application CL-3268. ADP 24-3669 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

- 10.a. Supersession of Previous Permits. ADP 24-3669 supersedes ADP 83-712 and ADP 83-693 in their entirety.
- 10.b. <u>General Basis.</u> Permit requirements for equipment affected by this permitting action incorporate the operating schemes proposed by the applicant in ADP Application CL-3268. Permit requirements established by this action are intended to implement BACT, minimize emissions, and assure compliance with applicable requirements on a continuous basis. Emission limits for approved equipment are based on the maximum potential emissions calculated in Section 6 of this Technical Support Document.
- 10.c. <u>Monitoring and Recordkeeping Requirements.</u> ADP 24-3669 establishes monitoring and recordkeeping requirements sufficient to document compliance with applicable emission limits, ensure proper operation of approved equipment and provide for compliance with generally applicable requirements. Specific monitoring requirements are established for coating consumption, heater fuel consumption, and engine operation.
- 10.d. <u>Reporting Requirements.</u> ADP 24-3669 establishes general reporting requirements for annual air emissions, upset conditions and excess emissions. Specific reporting requirements are established for coating consumption, heater fuel consumption, and engine operation. Reports are to be submitted on an annual basis.
- 10.e. Spray Coating. Visible emissions from the spray booth exhaust is limited to zero percent opacity, consistent with proper operation. The permittee is required to use high transfer efficiency spray equipment, such as HVLP or airless designs. Permit requirements 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.f. Emergency Generators. Permit requirements for this unit include operational limitations (≤ 100 hr/yr testing and maintenance) and the use of ultra-low sulfur diesel (≤ 0.0015% S by weight). A visible emission limit of 10% opacity has been established consistent with proper operation of the diesel engine. Due to technical limitations of the diesel engine, the opacity limit does not apply during periods of start-up and shutdown. Annual operation is monitored with an integral hourmeter.

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

- 11.a. <u>Start-up and Shutdown Provisions.</u> Pursuant to SWCAA 400-081 "Start-up and Shutdown", technology based emission standards and control technology determinations shall 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 shall include appropriate emission limitations, operating parameters, or other criteria to regulate performance of the source during start-up or shutdown.
  - Emergency Generator. Visible emissions from the diesel engine driven generator are limited to 10% opacity or less during normal operation. However, the engine is not capable of reliably limiting visible emissions to less than 10% opacity until the engine achieves normal operating temperature. Therefore, the opacity limit does not apply to the generator exhaust during start-up periods.
- 11.b. <u>Alternate Operating Scenarios.</u> 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 permit requirements.

11.c. <u>Pollution Prevention Measures.</u> 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 from those measures required under BACT considerations. Therefore, none were included in the permit requirements.

#### 12. EMISSION MONITORING AND TESTING

There are no formal emission monitoring or testing requirements for this facility.

## 13. FACILITY HISTORY

13.a. <u>Previous Permitting Actions.</u> SWCAA has previously issued the following Permits for this facility:

| Permit<br><u>Number</u> | Application <a href="Mailto:Number">Number</a> | <u>Date</u> | <u>Purpose</u>  |
|-------------------------|--|-------------|---|
| 83-712                  | CL-499R  | 10/17/1983  | Installation of new equipment in support of an operations and maintenance facility. |
| 83-693                  | CL-499   | 8/8/1983    | Installation of new equipment to establish an operations and maintenance facility.  |

## 13.b. <u>Compliance History</u>.

|             | NOV    |  |
|-------------|--------|--|
| <u>Date</u> | Number | <u>Violation</u>                                     |
| 3/5/2024    | 11043  | Installation and operation of unpermitted equipment. |

#### 14. PUBLIC INVOLVEMENT OPPORTUNITY

- 14.a. <u>Public Notice for ADP Application CL-3268</u>. Public notice for ADP Application CL-3268 was published on the SWCAA internet website for a minimum of (15) days beginning on March 27, 2024.
- 14.b. <u>Public/Applicant Comment for ADP Application CL-3268.</u> SWCAA did not receive specific comments, a comment period request or any other inquiry from the public regarding this ADP application. Therefore, no public comment period was provided for this permitting action.
- 14.c. <u>State Environmental Policy Act.</u> The City of Vancouver issued a Determination of Nonsignificance (DNS) for redevelopment of the existing C-Tran maintenance facility at 2425 NE 65<sup>th</sup> Avenue in Vancouver, Washington on October 17, 2019 (PRJ-162928/LUP-75937).