TECHNICAL SUPPORT DOCUMENT

Air Discharge Permit ADP 23-3606
Air Discharge Permit Application CO-1079

Issued: November 20, 2023

Steelscape, LLC

SWCAA ID - 1947

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Southwest Clean Air Agency

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ABBREVIATIONS

List of Acronyms

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

List of Units and Measures

acfm	Actual cubic foot per minute
dscfm	Dry Standard cubic foot per minute
gr/dscf	Grain per dry standard cubic foot
hp	Horsepower
hp-hr	Horsepower-hour
kW	Kilowatt
MMBtu	Million British thermal unit
MMcf	Million cubic feet
ppm	Parts per million
ppmv	Parts per million by volume
ppmvd	Parts per million by volume, dry
ppmw	Parts per million by weight
rpm	Revolution per minute
scfm	Standard cubic foot per minute
tpy	Tons per year

List of Chemical Symbols, Formulas, and Pollutants

CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
HAP	Hazardous air pollutant listed pursuant to Section 112 of the Federal Clean Air Act
HCl	Hydrochloric acid
N_2O	Nitrous oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
O_2	Oxygen
O_3	Ozone
PM	Particulate Matter with an aerodynamic diameter 100 µm or less
PM_{10}	PM with an aerodynamic diameter 10 µm or less
$PM_{2.5}$	PM with an aerodynamic diameter 2.5 µm or less
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
TAP	Toxic air pollutant pursuant to Chapter 173-460 WAC
VOC	Volatile organic compound

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:	Steelscape, LLC
Applicant Address:	222 W. Kalama River Road, Kalama, WA 98625
Facility Name:	Steelscape, LLC
Facility Address:	222 W. Kalama River Road, Kalama, WA 98625
SWCAA Identification:	1947
Contact Person:	Chris Carlson, Regional EHS Manager
Primary Process:	Steel Coil Milling and Surface Coating
SIC/NAICS Code:	3316 / Cold Finishing of Steel Shapes 331221 / Rolled Steel Shape Manufacturing
Facility Classification:	Title V Opt-out (Total HAP)

2. FACILITY DESCRIPTION

Steelscape, LLC (Steelscape) operates a steel coil milling and coating facility located in Kalama, Washington. The facility consists of a pickle line, a cold rolling mill, a metal coating line, a cut-to-length line, a painting line, and associated material handling equipment. Steel coil processed at the facility is received from other locations via railcar.

3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit application number CO-1079 (ADP Application CO-1079) dated July 27, 2023. Steelscape, LLC submitted ADP Application CO-1079 requesting approval of the following:

- Installation of a new Clean Planet / Always Clean 150 solvent recycling system.

The current permitting action provides approval for installation and operation of a solvent recycling system as proposed in ADP Application CO-1079.

ADP 23-3606 will supersede ADP 13-3070 in its entirety.

4. PROCESS DESCRIPTION

4.a. Process Boilers (*existing*). Two Cleaver Brooks natural gas fired boilers provide process steam to the facility (Process Boilers A & B).

4.b. Pickle Line (*existing*). The pickle line cleans hot mill scale and other surface contaminants from the "as received" steel coil. The pickle line consists of a series of tanks and baths containing hydrochloric acid solution and rinse stations. The process is fully enclosed with acidic vapors vented to the Pickle Line Scrubber (S1).

4.c. Cold Rolling Mill (*existing*). The rolling mill uses large rollers to cold work the steel to a desired thickness. An oil/water emulsion is sprayed on the steel coil as it is cold worked for the purposes of lubrication and cooling. Particulate emissions from the cold rolling mill vent to the Cold Rolling Mill Mist Eliminator (S3).

4.d. Roll Texturing (*existing*). A roll texturing system is located in the cold rolling mill maintenance shop. Shot blasting is used to etch knurling rolls used in the metal coating line. Exhaust from the blast booth is vented to the Roll Texturing Baghouse (I1).

4.e. Metal Coating Line – Molten Coating (*existing*). The metal coating line uses a proprietary coating process to clean, coat, and passivate steel coil. Steel coil is cleaned using rotary abrasive brushes and alkaline solutions containing sodium hydroxide. Emissions from the alkali cleaning system are vented to the MCL Cleaning Scrubber (S5). Steel coil then passes through the MCL Furnace (S6) where remaining surface oils and scale are burned off. After cleaning is completed, molten metal is applied to steel coil by direct immersion in a molten metal bath various zinc and/or aluminum alloys. Coated steel coil is cooled with radiant fixtures and powered fans subsequent to immersion. Coating alloys are melted using an offline electrical furnace and transferred to the molten bath through a launder line. Natural gas fired burners maintain the temperature of the molten metal while it moves through the launder line. Emissions from the MCL launder line burners exhaust through a roof monitor (R1).

4.f. Metal Coating Line – Roll Coaters A and B (*existing*). Steelscape uses two roll coaters (A and B) to apply water-based resins and water-based passivation coatings to steel coil. Coatings are dried with an electric induction oven. Emissions from coating application are collected from multiple points into a common header. The header is vented to the MCL Roll Coaters Mist Eliminator (S8).

Resin application in the roll coaters is subject to 40 CFR 60, Subpart TT "Standards of Performance for Metal Coil Surface Coating." Compliance with Subpart TT is achieved through the use of low VOC formulations.

4.g. Metal Coating Line – Electrostatic Coil Oiling (*existing*). A single electrostatic oiler is installed at the end of the MCL. The unit is used to apply a thin coating of oil to selected coils for the purpose of preventing corrosion during storage and shipping.

4.h. Ink Branding (*existing*). The facility uses ink branding units to label steel coils with UV ink as they are taken from selected processing lines. The inks used in the branding units contain VOC which is emitted as the ink dries on the coils. These emissions are fugitive in nature, mixing with room air inside the production building prior to ambient discharge through roof fans and open doors. Steelscape has approval to operate three ink branding units (Metal Coating Line, Paint Line, Cut-to-Length Line).

4.i. Paint Line (*existing*). Steel coil is cleaned, pretreated, and coated in the Paint Line. The Paint Line cleaning process uses a potassium hydroxide solution to clean the steel. Emissions from the cleaning process are vented to the Paint Line Cleaning Scrubber (S9a). Steel coil is pretreated with a corrosion resistant water based chromic acid solution. Emissions from the pretreatment process are vented to the Roll-on Pretreatment (ROPT) Mist Eliminator (S9b). Pretreated steel coil is dried in the ROPT oven at a maximum temperature of 300°F. Primer and finish coatings are applied to the treated steel coil in enclosed paint rooms and cured in enclosed ovens. Coating/solvent consumption for the paint rooms is recorded by the Sign Inventory Management System (SIMS) which also tracks the HAP and TAP content of each coating as entered from MSDS information.

The primer and finishing coating operations are subject to 40 CFR 60, Subpart TT "Standards of Performance for Metal Coil Surface Coating." Compliance with the requirements of that regulation is achieved by venting all emissions from the paint rooms and ovens to a thermal oxidizer with a VOC destruction efficiency greater than 90% (Paint Line Thermal Oxidizer S10).

4.j. Paint Mixing (*existing*). Finish coatings used at the facility are generally mixed onsite using a paint mix station. The paint mix station uses two base paints in combination with added colorants and reducer to produce a variety of finish coatings to meet customer specifications. Coatings are mixed in quantities sufficient to complete each individual order. Anticipated coating throughput is large enough to consume the base paints prior to expiration of its shelf life. This system minimizes the amount of leftover coating from each order, and reduces the amount of material discarded due to age. The paint mixing station is installed in a separate building adjacent to the paint warehouse. All emissions

from mixing operations are fugitive, and are released through the doors and openings of the building. Drums are kept closed except during actual transfer of coatings and mixing paddles. Mixing totes are kept closed except during transfer of coatings. Mixing paddles are stored in sealed drums when not in use.

4.k. Solvent Recycling (*new*). Solvent is recycled from paint waste using an automated package distillation unit. Recovered solvent is used in onsite coating operations.

ADP Application CO-1079. Steelscape proposes to install and operate a single packaged solvent recovery system. The system will be used to recycle solvent from paint waste generated by Paint Line operations.

4.l. Emergency Power Generation (*existing*). Emergency power for the facility is provided by an on-site diesel engine generator. The generator is housed in a small enclosure adjacent to the main building. The unit is operated for the purposes of testing approximately 15 minutes each week and as needed during unplanned power interruptions.

5. EQUIPMENT/ACTIVITY IDENTIFICATION

5.a. Pickle Line Scrubber - S1 (*existing*). One sieve tray packed scrubber is used to control HCl emissions from the pickle line.

Make / Model:	Precisioneering / Series 740
Air Flow:	7,200 acfm
Scrubber Bed:	6' diameter
Exhaust:	36" dia, vertical at ~100' above ground
Location:	46°02'36.7"N 122°51'58.3"W

5.b. Cold Rolling Mill Mist Eliminator - S3 (*existing*). A sequential set of demister pads is used to control entrained oil droplets generated in the cold rolling mill process.

Air Flow:	90,000 acfm
Exhaust:	71" dia, vertical at ~90' above ground
Location:	46°02'35.5"N 122°52'02.7"W

5.c. Roll Texturing Baghouse - I1 (*existing*). One baghouse is used to control particulate emissions from the Pangborn Abrasive Tight, Type "MR" Rotoblast Roll Etch Enclosure equipped with one variable speed Rotoblast Type "RI" etching unit and "BE" abrasive handling reclamation, and classification system.

Make / Model:	Torit Downflow / 2DF4
Air Flow:	2,000 acfm
Filtration Area:	904 ft² (air-to-cloth 2.2:1)
Exhaust:	1.03' dia, horizontal at ~10' above ground
Location:	46°02'36.9"N 122°52'00.9"W

5.d. Process Boiler A - S4 (*existing*). One natural gas fired package boiler used to provide process heat at the facility. The boiler is equipped with a four pass burner and internal flue gas recirculation to reduce NO_X. This unit exhausts through a common stack with Boiler B.

Make / Model:	Cleaver Brooks / CBLE 700-600-200
Heat Input Rating:	25.1 MMBtu/hr
Emissions:	30 ppmv NO_X / 50 ppmv CO – corrected to 3% O_2
Exhaust Stack:	44" diameter vertical at ~46' above ground
Location:	46°02'33.6"N 122°52'06.8"W

5.e. Process Boiler B - S4 (*existing*). One natural gas fired package boiler used to provide process heat at the facility. The boiler is equipped with a four pass burner and internal flue gas recirculation to reduce NO_X. This unit exhausts through a common stack with Boiler A.

Make / Model:	Cleaver Brooks / CBLE 700-600-200
Heat Input Rating:	25.1 MMBtu/hr
Emissions:	30 ppmv NO_X / 50 ppmv CO – corrected to 3% O_2
Exhaust Stack:	44" diameter vertical at ~46' above ground
Location:	46°02'33.6"N 122°52'06.8"W

5.f. Metal Coating Line Cleaning Scrubber - S5 (*existing*). One crossflow packed scrubber (2 ft wide by 7 ft high by 8.5 ft long) is used to remove NaOH fumes from the cleaning section of the metal coating line. The scrubber contains a 2 ft deep bed of #2 Type-R Tellerette packing. This scrubber has not operated since June 1998.

Make / Model:	Ceilcoate / HRP 24-24
Air Flow:	4,000 acfm
Exhaust:	18" dia, vertical at ~109' above ground
Location:	46°02'35.5"N 122°52'08.1"W

5.g. Metal Coating Line Furnace - S6 (*existing*). One direct-fired natural gas furnace is used to burn off any surface oils and oxide present on the steel strips.

Make / Model:	Selas Corporation
Heat Input Rating:	34.76 MMBtu/hr
Air Flow:	12,830 acfm
Exhaust Stack:	60" diameter vertical at ~111' above ground
Location:	46°02'35.6"N 122°52'09.4"W

5.h. Metal Coating Line Electrostatic Oiler System. Peabody Electrostatics serial number 66122. The oiler system is located at the end of the metal coating line, and has no active ventilation.

Location:	46°02'34.6"N 122°52'08.5"W

5.i. Metal Coating Line Launder Heater - R1 (*existing*). North American Manufacturing natural gas fired heater using 66 Selas model PR5-2N gas burners, each rated at 7,000 Btu/hr, for a total heat input of 0.46 MMBtu/hr is used to maintain the temperature of molten metal while being transferred to the coating furnace. Emissions from the natural gas fired heaters exhaust through roof monitor R1.

Location:	46°02'36.0"N 122°52'11.4"W

5.j. Metal Coating Line Passivation Scrubber - S7 (removed). One crossflow packed scrubber with three Kimre mesh pad sections is used for the removal of chromic acid mist and phosphoric acid from the metal coating line passivation system and/or roll coater H.

Make / Model:	*Ceilcote / HRP-14-Special*
Air Flow:	*1,420 acfm*
Exhaust:	*10" dia, vertical at 109' above ground*

ADP Application CO-1079. The MCL passivation system and scrubber were removed from service in June 2019.

5.k. Metal Coating Line Roll Coaters - Mist Eliminator/Filter - S8 (*existing*). One mist eliminator system is used to control emissions from the metal coating line roll coaters and the Ajax Magnethermic electrical induction curing oven.

Air Flow:	8,465 acfm (2001 test)
Exhaust:	22.75" dia, vertical at 109' above ground
Location:	46°02'35.7"N 122°52'10.9"W

The MCL Roll Coater emission control system is equipped with a Munters T-100 mist eliminator and 3 sequential rows of HEPA filters. The mist eliminator is installed upstream of the HEPA filters. The housing for the HEPA filters is 24" high by 48" wide with each filter row consisting of two individual filters (24" by 24") placed side by side. Individual filter rows have the following performance characteristics:

Filter Row	Size	Thickness	Rated Efficiency
First row	24" x 24"	2"	98% @ ≥ 20 μm
Second row	24" x 24"	2"	90-92% @ ≥ 5 μm
			25-30% @ ≥ 1 μm
Third row	24" x 24"	1"	90% @ ≥ 5 μm

5.l. Paint Line Cleaning Scrubber - S9a (*existing*). One packed bed scrubber containing a 2'deep bed of #2 Type-R Tellerette packing is used to control alkali (potassium hydroxide) mist from the coil paint line alkaline cleaning system.

Make / Model:	Ceilcote / HRP 24-24
Air Flow:	3,910 acfm
Exhaust:	18.5" dia, vertical at 109' above ground
Location:	46°02'34.8"N 122°52'14.4"W

5.m. Roll-on Pretreatment Mist Eliminator - S9b (*existing*). One Tri-Mer Corporation mist eliminator controls chromium emissions from the ROPT process. The mist eliminator is equipped with an inlet spray and two banks of profiled impingement blades. Exhaust gases contain chromic acid mist from the ROPT roll coater and combustion products from the ROPT oven.

Make:	Tri-Mer
Air Flow:	1,895 acfm
Exhaust:	18" dia, vertical at 109' above ground
Location:	46°02'34.9"N 122°52'16.1"W

5.n. Paint Line Coating Rooms / Curing Ovens - S10 (*existing*). Steel coils are coated in the Paint Line as they pass through a series of coating rooms and curing ovens. The coating rooms and curing ovens are described as follows:

- SAS model 04/6420/H primer coating room.
- SAS model 04/6420/H finish coating room.
- SAS model 04/6420/D natural gas fired primer curing oven equipped with (4) Eclipse model TJPCA0500 burners rated at 5.0 MMBtu/hr each.
- SAS model 04/6420/D natural gas fired finish curing oven equipped with (4) Eclipse model TJPCA0500 burners rated at 5.0 MMBtu/hr each.

Paint Line Thermal Oxidizer (*existing*). Exhaust streams from the Paint Line are vented to an oxidizer for control of VOC emissions. The oxidizer has a regenerative configuration. A continuous monitor is installed to record the combustion temperature of the effluent gases.

Make / Model:	Epcon
Heat Input Rating:	12.0 MMBtu/hr
Air Flow:	35,000 acfm
Exhaust Stack:	7' dia, vertical at 100' above ground
Location:	46°02'34.7"N 122°52'19.1"W

5.o. Ink Branders (*existing*). Three Video Jet "IPro" ink branders. Steelscape has approval to install ink branders on the Metal Coating Line, Paint Line and Cut-to-Length Line. Two branders are currently installed (Metal Coating Line and Paint Line). VOC emissions from ink application are emitted fugitively to the building headspace.

Location: 46°02'36.8"N 122°52'05.8"W

5.p. Emergency Generator (*existing*). One Cummins Power Systems model DFLC generator rated at 1250 kW. The generator is powered by a Cummins KTA 50-G3 4-cycle 16 cylinder diesel engine rated at 1,850 bhp.

Location: 46°02'34.5"N 122°52'09.9"W

5.q. Paint Mixing Station (*existing*). One paint mixing station consisting of a base paint transfer area, a mixing paddle storage area, and four portable mixing paddles. The mixing station can mix up to four drums simultaneously. The station is located in the eastern end of the paint warehouse, and is separated from the remainder of the warehouse by a block wall. The station is not equipped with an active exhaust. VOC, TAP and HAP emissions from this unit are fugitive in nature.

Location: 46°02'32.9"N 122°52'17.9"W

5.r. Solvent Recycling System (new). One Clean Planet / Always Clean 150 solvent recycling system. This unit is used to recover solvent from paint waste generated onsite.

Location: 46°02'32.9"N 122°52'17.9"W

ADP Application CO-1079. Steelscape proposes to install a package solvent recycling system to reclaim solvent from onsite paint waste. The recovered solvent will be used in onsite coating operations. No other changes in coating operations are proposed.

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

Space Heating. (6) natural gas fired space heaters with a combined heat input rate of 0.195 MMBtu/hr. No single heating unit is larger than 0.035 MMBtu/hr. All of the heaters are used exclusively for space heating. Space heaters as a group were previously registered as an emission unit at this facility. Over time, Steelscape has removed many of the units, and greatly reduced heater use. Current use is considered to be at an insignificant level so the remaining units are being removed from registration and reclassified as insignificant emission units.

Analytical Laboratories. Three small laboratories located in the Cold Mill, Coating/Paint Line, and Water Treatment process areas. The onsite analytical laboratories do not emit any TAP compound in a quantity that exceeds the applicable SQER, and are used only for facility related quality control analyses.

5.t. Equipment/Activity Summary.

ID No.	Equipment/Activity	Control Equipment/Measure
1	Pickle Line	Wet Scrubber
2	Cold Rolling Mill	Mist Eliminator
3	Roll Texturing Operation	Fabric Filtration
4	Process Boiler - A	Low Emission Burner w/FGR, Low Sulfur Fuel (Nat Gas)
5	Process Boiler - B	Low Emission Burner w/FGR Low Sulfur Fuel (Nat Gas)
6	Metal Coating Line Cleaning Equipment	Wet Scrubber
7	Metal Coating Line Furnace	Oxygen Deficient Combustion
8	Metal Coating Line Launder Heater	N/A
10	Metal Coating Line Roll Coaters A and B	Low VOC Coatings, Mist Eliminator, HEPA filtration
11	Paint Line Cleaning System	Wet Scrubber
12	Paint Line Pretreatment Process	Mist Eliminator
13	Paint Line Coating Rooms/Curing Ovens	Regenerative Thermal Oxidizer
14	Electrostatic Oiler System	N/A
15	Ink Branding	N/A
16	Emergency Generator	Low Sulfur Diesel / Limited Operation
17	Paint Mixing Station	N/A
18	Solvent Recycling System	Process Enclosure, Condenser

6. EMISSIONS DETERMINATION

Emissions to the ambient atmosphere from the operations proposed in ADP Application CO-1079 consist of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM) sulfur dioxide (SO_2), 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. Pickle Line Scrubber (S1) (*existing*). The pickle line scrubber controls emissions of hydrogen chloride mist from pickle line operations, and has a design control efficiency of approximately 99%. Hydrogen chloride emissions at the outlet are expected to be a maximum of 6.3 milligrams per normal cubic meter (mg/Nm^3) (~0.00275 gr/scf).

Annual Operation:	7,703 hrs	Exhaust Rate:	11,460 m^3/hr
Pollutant	Emission Factor	Emsn Conc. (gr/scf)	Emissions
PM	6.3 mg/m^3	0.00275	0.61 tpy
PM_{10}	94% PM	0.0026	0.58 tpy
$PM_{2.5}$	78% PM	0.0021	0.48 tpy
HCl	100% PM	0.00275	0.61 tpy

6.b. Roll Texturing Baghouse (I1) (*existing*). The roll texturing baghouse (cartridge collector) controls particulate emissions from the roll texturing enclosure, and has a rated control efficiency of 99.9%. Although early permitting applications specify maximum operation as 1,453 hr/yr, emission limits have traditionally been established based on a maximum of 8,760 hr/yr.

Annual Operation:	8,760 hrs	Exhaust Rate:	2,000 cfm
Pollutant	Emission Factor	Emsn Conc. (gr/scf)	Emissions (tpy)
PM	0.0004 gr/scf	0.0004	0.030
PM_{10}	100% PM	0.0004	0.030
$PM_{2.5}$	78% PM	0.0003	0.023

6.c. Cold Rolling Mill Mist Eliminator (S3) (*existing*). The cold rolling mill mist eliminator controls oil mist emissions from the milling operations. Potential emissions are calculated from a maximum PM emission rate of 1.92 lb/hr and 8,760 hr/yr of operation.

Annual Operation:	8,760 hrs		
Pollutant	Emission Factor	Emission Rate (lb/hr)	Emissions (tpy)
PM	1.92 lb/hr	1.92	8.41
PM_{10}	94% PM	1.80	7.91
$PM_{2.5}$	78% PM	1.50	6.56

6.d. Process Boilers A and B (S4) (*existing*). Emissions from boiler operation are calculated based on a combined heat input of 50.2 MMBtu/hr, 8,760 hr/yr of operation, and applicable emission factors. Each process boiler is equipped with a four pass burner and internal flue gas recirculation to limit nitrogen oxide (NO_x) emissions to 30 parts per million (ppm). All PM emissions are assumed to be $PM_{2.5}$.

Heat Input:	439,752.00	MMBtu	(8760 hr/yr @ 52 MMBtu/hr)
Gas Heat Content:	1,020	Btu/scf for AP-42 emission factors	
Gas Heat Content:	1,028	Btu/scf for 40 CFR 98 emission factors	

Pollutant	EF (lb/MMscf)	EF (lb/MMBtu)	Emissions		EF Source
NOx	40.0	0.0392	8.62	tpy	Manufacturer
CO	40.0	0.0392	8.62	tpy	Manufacturer
$PM/PM_{10}/PM_{2.5}$	7.6	0.0075	1.64	tpy	AP-42 Sec. 1.4
VOC	5.5	0.0054	1.19	tpy	AP-42 Sec. 1.4
SO_X as SO_2	0.6	0.0006	0.13	tpy	AP-42 Sec. 1.4
Benzene	0.0021	0.000002	0.0005	lb/yr	AP-42 Sec. 1.4
Formaldehyde	0.075	0.00007	0.016	lb/yr	AP-42 Sec. 1.4

Greenhouse Gases	EF (kg/MMBtu)	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	53.02	1	116.89	25,701	40 CFR 98
CH_4	0.001	21	0.046	10	40 CFR 98
N_2O	0.0001	310	0.068	15	40 CFR 98
Total GHG (CO_2e)			117.004	25,726	

6.e. Metal Coating Line Cleaning Scrubber (S5) (*existing*). The MCL cleaning scrubber controls NaOH emissions from the alkali cleaning tanks and brushes. The scrubber is designed to achieve a 99 percent removal efficiency by weight for NaOH mist particles 7 microns (μm) and larger. In practice, the scrubber limits emissions of NaOH fume and mist to an outlet concentration of 2.0 mg/Nm3 (0.0008 gr/scf) based on performance test data from a similar facility.

Annual Operation:	8,760	hrs	Exhaust Rate:	4,000	cfm

Pollutant	Emission Factor	Emsn Conc. (gr/scf)	Emissions (tpy)	
PM	2.0 mg/m3	0.00087	0.13	
PM_{10}	100% PM	0.00087	0.13	
$PM_{2.5}$	78% PM	0.00068	0.10	
TAP	100% PM	0.00087	0.13	
NaOH	100% PM	0.00087	261.30	lb/yr

6.f. Metal Coating Line Furnace (S6) (*existing*). Emissions from the MCL furnace are the result of natural gas combustion and surface contaminant burn-off. Emissions from the furnace are calculated from a maximum fuel consumption of 34,760 ft^3/hr, annual fuel consumption of 266 MMcf and applicable emission factors. All emitted PM is assumed to be $PM_{2.5}$.

Heat Input:	271,320.00	MMBtu	(266 MMcf annual usage)			
Gas Heat Content:	1,020	Btu/scf for AP-42 emission factors				
Gas Heat Content:	1,028	Btu/scf for 40 CFR 98 emission factors				
Pollutant	Emission Factor	Emission Factor		Emissions		EF Source
NO_X	106 ppmv @ 3%	0.1287	lb/MMBtu	17.46	tpy	Manufacturer
CO	78 ppmv @ 3%	0.0576	lb/MMBtu	7.81	tpy	Manufacturer
$PM/PM_{10}/PM_{2.5}$		0.548	lb/hr	2.40	tpy	Application
VOC		0.0960	lb/hr	0.42	tpy	Application
SO_X as SO_2	0.6 lb/MMcf	0.0006	lb/MMBtu	0.08	tpy	AP-42 Sec. 1.4
Benzene	0.0021	0.000002	lb/MMBtu	0.56	lb/yr	AP-42 Sec. 1.4
Formaldehyde	0.075	0.00007	lb/MMBtu	19.95	lb/yr	AP-42 Sec. 1.4

Greenhouse Gases	kg/MMBtu	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	53.02	1	116.89	15,857	40 CFR 98
CH_4	0.001	21	0.046	6	40 CFR 98
N_2O	0.0001	310	0.068	9	40 CFR 98
Total GHG (CO_2e)			117.004	15,873	

6.g. Metal Coating Line Electrostatic Oiler System (*existing*). Emissions from oil application are calculated via material balance based on actual oil usage and VOC content.

Annual Consumption:	6,800	gal		
Pollutant	EF (lb/gal)		Emissions	
VOC	0.44		1.496	tpy

6.h. Ink Branding (*existing*). Emissions from operation of the ink branders are calculated from ink consumption and material balance methodology. HAP/TAP data is taken from MSDS information provided by the vendor. Previous permitting actions have assumed an average VOC content of 6.62 lb/gal.

Annual Consumption:	225.0 gal		
Pollutant	EF (lb/gal)	Emissions	
VOC	6.62	0.745	tpy
HAPs	5.73	0.645	tpy
TAPs	5.99	0.674	tpy
2-Butanone	3.84	864.0	lb/yr
Methanol	1.85	416.3	lb/yr
Tributyl phosphate	0.13	29.3	lb/yr
Isopropanol	0.13	29.3	lb/yr

6.i. Metal Coating Line Launder Heater (R1) (*existing*). Emissions from the MCL launder heater are the result of natural gas combustion. All emitted PM is assumed to be $PM_{2.5}$.

Heat Input:	3,679.20	MMBtu	(8760 hr/yr @ 0.42 MMBtu/hr)
Gas Heat Content:	1,020	Btu/scf for AP-42 emission factors	
Gas Heat Content:	1,028	Btu/scf for 40 CFR 98 emission factors	

Pollutant	EF (lb/MMscf)	EF (lb/MMBtu)	Emissions		EF Source
NO_X	100.0	0.0980	0.180	tpy	Manufacturer
CO	84.0	0.0824	0.151	tpy	Manufacturer
$PM/PM_{10}/PM_{2.5}$	7.6	0.0075	0.014	tpy	AP-42 Sec. 1.4
VOC	5.5	0.0054	0.010	tpy	AP-42 Sec. 1.4
SO_X as SO_2	0.6	0.0006	0.001	tpy	AP-42 Sec. 1.4
Benzene	0.0021	0.000002	0.0005	lb/yr	AP-42 Sec. 1.4
Formaldehyde	0.075	0.00007	0.016	lb/yr	AP-42 Sec. 1.4

Greenhouse Gases	EF (kg/MMBtu)	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	53.02	1	116.89	215	40 CFR 98
CH_4	0.001	21	0.046	0.1	40 CFR 98
N_2O	0.0001	310	0.068	0.1	40 CFR 98
Total GHG (CO_2e)			117.004	215	

6.j. Metal Coating Line Roll Coater Mist Eliminator/Filters (S8) (*existing*). The MCL roll coater mist eliminator controls emissions of VOC, phosphoric acid, and chromium compounds from roll coaters A and B. These emissions are generated by application of primers, resins, and passivation solutions. The emission controls on this stack reduce

aerosol emissions (phosphoric acid and chromium compounds), but do not reduce VOC emissions. Potential VOC/TAP/HAP emissions reflected the level of emissions requested by Steelscape in the permit application. Potential chromium (VI) emissions are calculated based on tested emission rates and 8,760 hr/yr of operation. All emitted PM is assumed to be $PM_{2.5}$.

Annual Operation:	8,760.0 hrs	
Pollutant	EF (lb/hr)	Emissions
PM	9.90E-06	0.00004 tpy
PM_{10}	9.90E-06	0.00004 tpy
$PM_{2.5}$	9.90E-06	0.00004 tpy
VOC	Material Balance	8.50 tpy
Chromium (VI)	9.90E-06	0.087 lb/yr
Glycol Ethers	Material Balance	6.10 tpy
HAPs	Material Balance	6.10 tpy
TAPs	Material Balance	6.10 tpy

6.k. Paint Line Cleaning Scrubber (S9a) (*existing*). The paint line cleaning scrubber controls emissions of alkaline cleaning solution (KOH) from the paint line cleaning tanks. The cleaning scrubber is designed to achieve a 99% control efficiency by weight for KOH mist particles 7 microns (μm) and larger. Annual emissions are calculated based on estimated/tested emission rates and actual hours of operation. PM emissions are assumed to be 94% PM_{10} and 78% $PM_{2.5}$.

Annual Operation:	8,760.0 hrs	
Pollutant	EF (lb/hr)	Emissions
PM	0.050	0.22 tpy
PM_{10}	0.047	0.21 tpy
$PM_{2.5}$	0.039	0.17 tpy
KOH	0.015	131.4 lb/yr

6.l. Roll-on Pretreatment (ROPT) Mist Eliminator (S9b) (*existing*). Exhaust gases from the ROPT oven and roll coater are vented to the ROPT mist eliminator. The exhaust gases contain both chromic acid mist and combustion products. The mist eliminator configuration achieves a 90% control efficiency for chromic acid mist based on test data from similar equipment. PM emissions from the ROPT oven include combustion products as well as burnt scale and residue originating from the steel coil being treated. All PM emissions are assumed to be $PM_{2.5}$.

Heat Input:	21,900.00	MMBtu	(8760 hr/yr @ 2.5 MMBtu/hr)
Operation:	8,760.00	Hours	
Gas Heat Content:	1,020	Btu/scf for AP-42 emission factors	
Gas Heat Content:	1,028	Btu/scf for 40 CFR 98 emission factors	

Pollutant	EF (lb/MMscf)	Emission Factor		Emissions (tpy)		EF Source
NO_X	50.0	0.0490	lb/MMBtu	0.54	tpy	AP-42 Sec. 1.4 (low NOx)
CO	84.0	0.0824	lb/MMBtu	0.90	tpy	AP-42 Sec. 1.4
$PM/PM_{10}/PM_{2.5}$	--	0.1000	lb/hr	0.44	tpy	AP-42 Sec. 1.4
VOC	5.5	0.0054	lb/MMBtu	0.06	tpy	AP-42 Sec. 1.4
SO_X as SO_2	0.6	0.0006	lb/MMBtu	0.006	tpy	AP-42 Sec. 1.4
Benzene	0.0021	0.000002	lb/MMBtu	0.045	lb/yr	AP-42 Sec. 1.4
Formaldehyde	0.075	0.00007	lb/MMBtu	1.610	lb/yr	AP-42 Sec. 1.4
Chromium (VI)	--	1.23E-05	lb/hr	0.108	lb/yr	Test data

Greenhouse Gases	EF (kg/MMBtu)	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	53.02	1	116.89	1,280	40 CFR 98
CH_4	0.001	21	0.046	0.5	40 CFR 98
N_2O	0.0001	310	0.068	0.7	40 CFR 98
Total GHG (CO_2e)			117.004	1,281	

6.m. Paint Line Oxidizer (S10) (*existing*). Exhaust gases from the primer coating room, primer curing oven, finish coating room, finish curing oven are vented to the paint line oxidizer. The oxidizer is designed to have a VOC destruction efficiency > 99.5%. Annual emissions from the Paint Line oxidizer are calculated as follows:

(1) NO_x and CO emissions are calculated from the emission rate quantified in the most recent emission test and actual hours of operation.

(2) VOC/TAP/HAP emissions from natural gas combustion in the oven and oxidizer burners are calculated from the applicable EPA AP-42 emission factor and actual natural gas consumption.

(3) VOC/TAP/HAP emissions from coating fumes are calculated from actual coating consumption, coating solvent content, and oxidizer control efficiency as quantified in the most recent emission test.

(4) PM and formaldehyde emissions are calculated from the emission rate quantified in the 1/19/00 emission test and actual hours of operation. All PM is assumed to be $PM_{2.5}$.

(5) SO_2 emissions are calculated from the applicable EPA AP-42 emission factor and actual natural gas consumption.

Heat Input:	262,800.00	MMBtu	(8,760 @ 30.0 MMBtu/hr)
Operation:	8,760.00	hours	
Exhaust rate:	35,000	cfm	
Gas Heat Content:	1,020	Btu/scf for AP-42 emission factors	
Gas Heat Content:	1,028	Btu/scf for 40 CFR 98 emission factors	

Pollutant	Emission Factor		Emissions		Emission Factor Source
NO_X	8.9	lb/hr	38.98	tpy	Manufacturer
CO	2.5	lb/hr	10.95	tpy	Manufacturer
$PM/PM_{10}/PM_{2.5}$	0.0016	gr/dscf	2.10	tpy	Original Project Application
VOC_{total}			25.00	tpy	
$VOC_{nat\ gas}$	5.5	lb/MMscf	0.71	tpy	AP-42 Sec. 1.4
VOC_{paint}	--		24.29	tpy	Mass Balance & Control Eff.
SO_X as SO_2	0.6	lb/MMscf	0.08	tpy	AP-42 Sec. 1.4
HAPs	--		24.29	tpy	Mass Balance & Control Eff.
TAPs	--		24.29	tpy	Mass Balance & Control Eff.
Benzene	0.0021	lb/MMscf	0.54	lb/yr	Original Project Application
Formaldehyde	0.0115	lb/hr	100.74	lb/yr	Original Project Application

Greenhouse Gases	EF (kg/MMBtu)	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	53.02	1	116.89	15,359	40 CFR 98
CH_4	0.001	21	0.046	6	40 CFR 98
N_2O	0.0001	310	0.068	9	40 CFR 98
Total GHG (CO_2e)			117.004	15,374	

6.n. Emergency Generator (*existing*). Potential emissions from the Cummins emergency diesel generator are calculated from 200 hr/yr of operation and applicable emission factors. The emission factor for SO_2 has been calculated based on a maximum fuel sulfur content of 0.05% by weight. Emission factors for all other pollutants are taken from manufacturer's data. All PM emissions are assumed to be $PM_{2.5}$.

Operation:	200.0	hours
Rated horsepower:	1850	hp
Max fuel sulfur:	0.05	% by weight

Pollutant	EF (g/hp-hr)	Emissions (lb/hr)	Emissions (tpy)	EF Source
NO_X	12.6	51.39	5.14	Manufacturer
CO	0.58	2.37	0.24	Manufacturer
$PM/PM_{10}/PM_{2.5}$	0.07	0.29	0.029	Manufacturer
VOC	0.13	0.53	0.053	Manufacturer
SO_X as SO_2	0.14	0.57	0.057	Mass Balance

Greenhouse Gases	kg/MMBtu	GWP	CO_2e (lb/MMBtu)	CO_2e (tpy)	EF Source
CO_2	73.96	1	163.05	178	40 CFR 98
CH_4	0.003	21	0.139	0.2	40 CFR 98
N_2O	0.0006	310	0.410	0.4	40 CFR 98
Total GHG (CO_2e)			163.603	179	

6.o. Paint Mixing Station (*existing*). VOC/TAP/HAP emissions from the paint mixing station are fugitive in nature. Emissions are estimated using vapor pressure calculations, vapor saturation concentrations, and average headspace volumes in the paint drums and paddles storage drums. Assuming vapor saturation in the drum headspaces and total release of the headspace each time a drum is opened, maximum emissions from the mix station are estimated to be:

Operation: 8,760.0 hours

Pollutant	Emission Factor (lb/hr)	Emissions	
VOC	0.09	0.38	tpy
Benzene	6.01E-05	0.53	lb/yr
Cumene	3.81E-04	3.34	lb/yr
Ethylbenzene	4.48E-04	3.92	lb/yr
Ethylene glycol monobutyl ether	5.45E-08	0.0005	lb/yr
Hexane	9.78E-05	0.86	lb/yr
Naphthalene	1.27E-04	1.11	lb/yr
Toluene	1.40E-05	0.12	lb/yr
2,2,4-Trimethylpentane	3.07E-05	0.27	lb/yr
Xylene	1.77E-03	15.5	lb/yr

6.p. Solvent Recycling System (*new*). VOC/TAP/HAP emissions from operation of the solvent system are estimated based on material throughput, constituent weight percentage, vapor pressure calculations, and vapor saturation concentrations.

Throughput: 35,000 Gallons

Pollutant	EF (lb/gal)	Material %	Emissions (lb/hr)	Emissions (tpy)
VOC	0.0084		0.034	0.15
				(lb/yr)
Acetone		29.0%	0.010	85.3
Xylene		12.0%	0.004	35.3
Methanol		10.0%	0.003	29.4
Isopropanol		11.0%	0.004	32.3
n-Propanol		7.0%	0.002	20.6
Ethanol		3.0%	0.001	8.8

Toluene	7.0%	0.002	20.6
Stoddard Solvent	4.0%	0.001	11.8
2-Butanone	4.0%	0.001	11.8
Solvent Naphtha	4.0%	0.001	11.8
Propyl Acetate	3.0%	0.001	8.8
n-Butanol	2.0%	0.001	5.9
Isobutanol	2.0%	0.001	5.9
Ethyl Benzene	2.0%	0.001	5.9

ADP Application CO-1079. Emissions from operation of the solvent system are calculated by the vendor based on an historic site specific waste profile. The type and proportion of individual chemical constituents may vary in the future if the waste profile changes.

6.q. Emissions Summary/Facility-wide Potential to Emit. Facility-wide potential to emit as calculated in the sections above is summarized below. Potential emissions of TAP/HAP compounds from selected emission units are not directly limited by approval condition. In those cases, maximum emissions are quantified based on historic maximums and technical information from previous permitting actions.

Current permit requirements establish emissions limits for VOC and HAP/TAP emissions from each emission unit. The total sum of individual emission limits for HAP emissions exceeds Title V applicability thresholds. In order to avoid Title V applicability, a facility-wide emission limit that supersedes the individual limits is in place. The facility-wide 'opt-out' emission limit is being carried forward in this permitting action. VOC/HAP emission limits for individual emission units remain in place. Project increase values below correspond to potential emissions from the new solvent recycling system. Potential TAP emissions are estimated based on the sum of the individual emission limits. Potential HAP emissions are limited by the facility-wide limit (9.5 tpy single / 24.5 tpy combined).

Pollutant	Potential Emissions (tpy)	Project Increase (tpy)	
NO_X	70.92 tpy	0.0 tpy	
CO	28.68 tpy	0.0 tpy	
VOC	37.84 tpy	0.15 tpy	
SO_2	0.35 tpy	0.0 tpy	
Lead	0.00 tpy	0.0 tpy	
PM	16.02 tpy	0.0 tpy	*Some PM_{10} and $PM_{2.5}$ values are not directly established by emission limit.*
PM_{10}	15.47 tpy	0.0 tpy	
$PM_{2.5}$	13.95 tpy	0.0 tpy	
TAP	32.09 tpy	0.14 tpy	*Assumes all coating VOC emissions are TAPs*
HAP	24.50 tpy	0.0 tpy	
CO_2e	58,648 tpy	0.00 tpy	

Pollutant	CAS Number	Category	Facility-wide Emissions (lb/yr)	Incremental Increase (lb/yr)	WAC 173-460 SQER (lb/yr)
Acetaldehyde	75-07-0	HAP/TAP A	0.001	0.0	50
Acetic Acid	64-19-7	TAP B	0.001	0.0	10,500
Acetone	67-64-1	TAP B	2,065.3	85.3	43,748
Ammonia	7664-41-7	TAP B	2,897	0.0	17,500
Benzene	71-43-2	HAP/TAP A	0.53	0.0	20
2-Butanol	78-92-2	TAP B	1.1	0.0	43,748
2-Butanone	78-93-3	HAP/TAP B	875.8	11.8	43,748

Pollutant	CAS Number	Category	Facility-wide Emissions (lb/yr)	Incremental Increase (lb/yr)	WAC 173-460 SQER (lb/yr)
2-Butoxyethyl Acetate	112-07-2	HAP/TAP B	1.7	0.0	43,748*
2-Ethoxyethyl Acetate	111-15-9	HAP/TAP B	1,500	0.0	43,748*
n-Butyl Acetate	123-86-4	TAP B	600	0.0	43,748
n-Butyl Acrylate	141-32-2	TAP B	216	0.0	22,750
n-Butyl Alcohol	71-36-3	TAP B	1,005.9	5.9	43,748
Chromium (VI)	7440-47-3	HAP/TAP A	0.282	0.0	0
Chromic Acid	1333-82-0	HAP/ TAP B	175	0.0	175
Cobalt compounds	-	HAP/TAP B	175	0.0	175
Cumene	98-82-2	HAP/TAP B	20	0.0	43,748
Cyclohexanone	108-94-1	TAP B	20	0.0	43,748
Diacetone Alcohol	123-42-2	TAP B	1,000	0.0	43,748
Diethylene Glycol Monobutyl Ether	112-34-5	HAP/TAP B	11.6	0.0	43,748*
Diethylene Glycol Monobutyl Ether Acetate	124-17-4	HAP/TAP B	4.8	0.0	43,748*
Dimethyl Phthalate	131-11-63	HAP/TAP B	150	0.0	1,750
Dipropylene Glycol Methyl Ether	34590-94-8	TAP B	500	0.0	43,748
Ethyl Acetate	141-78-6	TAP B	0.01	0.0	43,748
Ethylene Glycol Monobutyl Ether	111-76-2	HAP/TAP B	11,900	0.0	43,748*
Ethanol	64-17-5	TAP B	158.8	8.8	43,748
Ethyl Benzene	100-41-4	HAP/TAP B	105.9	5.9	65
Ethylene Glycol	107-21-1	HAP/TAP B	500	0.0	43,748
Formaldehyde	50-00-0	HAP/TAP A	100	0.0	20
Hexane	110-54-3	HAP/TAP B	0.9	0.0	22,750
Hydrogen Chloride	7647-01-0	HAP/TAP B	2,440	0.0	175
Isophrone	78-59-1	HAP/TAP B	900	0.0	10,500
Isobutanol	78-83-1	TAP B	305.9	5.9	43,748
Isopropyl Acetate	108-21-4	TAP B	100	0.0	43,748
Isopropanol	67-63-0	TAP B	1,222.3	32.3	43,748
Methanol	67-56-1	HAP/TAP B	449.4	29.4	43,748
Methyl Amyl Ketone	110-43-0	TAP B	10	0.0	43,748
Methyl Ethyl Ketone	78-93-3	HAP/TAP B	500	0.0	43,748
Methyl Isobutyl Ketone	108-10-1	HAP/TAP B	200	0.0	43,748
Methyl Methacrylate	80-62-6	HAP/TAP B	30	0.0	43,748
Naphthalene	91-20-3	HAP/TAP B	1,000	0.0	22,750
Nickel Oxide	112-15-2	HAP/TAP A	0.5	0.0	0.5
Phenol	108-95-2	HAP/TAP B	100	0.0	10,500

Pollutant	CAS Number	Category	Facility-wide Emissions (lb/yr)	Incremental Increase (lb/yr)	WAC 173-460 SQER (lb/yr)
Phosphoric Acid	7664-38-2	TAP B	350	0.0	175
Potassium Hydroxide	1310-58-3	TAP B	140	0.0	175
n-Propanol	71-23-8	TAP B	20.6	20.6	43,748
2-Propoxy Ethanol	2807-30-9	HAP/TAP B	6.6	0.0	43,748
Propyl Acetate	109-60-4	TAP B	14.35	8.8	43,748
Propylene Glycol Monomethyl Ether	107-98-2	TAP B	0.02	0.0	43,748
Sodium Hydroxide	1310-73-2	TAP B	480	0.0	175
Styrene	100-42-5	HAP/TAP B	216	0.0	43,748
Toluene	108-88-3	HAP/TAP B	720.6	20.6	43,748
Tributyl phosphate	126-73-8	TAP B	30	0.0	175
Trimethylbenzene	2551-13-7	TAP B	800	0.0	43,748
Xylene	1330-20-7	HAP/TAP B	735.3	35.3	43,748

* Listed TAP compounds are classified as glycol ethers, and are cumulatively subject to a SQER of 43,748.

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 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" applies to any steam generating unit with a heat input greater than or equal to 10 million Btu/hr, but less than or equal to 100 million Btu/hr constructed, modified, or reconstructed after June 9, 1989. Both of the Cleaver Brooks boilers at this facility are subject to this regulation.

7.b. 40 CFR 60 Subpart TT "Standards of Performance for Metal Coil Surface Coating" applies to each steel coil prime coat and/or finish coat operation that commences construction after January 5, 1981. This regulation applies to surface coating operations that use organic coatings. The Paint Line paint rooms and roll coaters A and B are subject to this regulation.

7.c. 40 CFR 63 Subpart CCC "National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants" applies to selected steel pickling facilities and hydrochloric acid regeneration plants located at a major HAP source. This regulation does not apply to the pickle line at this facility because the facility is not a major HAP source.

7.d. 40 CFR 63 Subpart SSSS "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil" applies to coil coating lines located at a major HAP source. This regulation does not apply to the coil coating operations at this facility because the facility is not a major HAP source.

7.e. 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. The emergency generator's power unit is an existing stationary CI RICE as defined in 40 CFR 63.6590(a)(1)(iii). Pursuant to 40 CFR 63.6590(b)(3), the unit is not subject to any requirements from 40 CFR 63, Subparts A or ZZZZ.

7.f. 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.g. 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 Air Discharge Permit for installation and establishment of an air contaminant source.

7.h. WAC 173-401 "Operating Permit Regulation" requires all major sources and other sources as defined in WAC 173-401-300 to obtain an operating permit. This regulation is not applicable because this source has taken emissions limits on potential emissions lower than the applicability thresholds set forth in WAC 173-401-300.

7.i. 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.j. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM_{10}, $PM_{2.5}$, lead, sulfur dioxide, nitrogen dioxide, ozone, and carbon monoxide in the ambient air, which shall not be exceeded.

7.k. 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.l. 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.m. 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.n. SWCAA 400-091 "Voluntary Limits on Emissions" allows sources to request voluntary limits on emissions and potential to emit by submittal of an ADP application as provided in SWCAA 400-109. Upon completion of review of the application, SWCAA shall issue a Regulatory Order that reduces the source's potential to emit to an amount agreed upon between SWCAA and the permittee.

7.o. 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.p. SWCAA 400-110 "New Source Review" 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.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 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) Best Available Control Technology 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.

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. BACT Determination – Solvent Recycling System. The proposed use of process enclosure, enclosed storage, and a high efficiency condenser has been determined to meet the requirements of BACT for solvent recycling systems at this facility.

Previous BACT Determinations

8.b. BACT Determination - Metal Coating Line Roll Coaters A and B (ADP *13-3070*). The proposed use of low VOC coatings, a filtration system capable of maintaining an exhaust gas particulate matter concentration ≤ 0.004 gr/dscf, a particulate matter control efficiency of ≥ 99%, and vertical dispersion of exhaust streams has been determined to meet the requirements of BACT and T-BACT for roll coaters at this facility.

8.c. BACT Determination - Pain Line Ovens/Thermal Oxidizer (*ADP 11-2964*). The proposed use of a thermal oxidizer capable of achieving a VOC destruction efficiency of at least 98.5 percent by design, an exhaust gas opacity of zero percent, an exhaust gas particulate matter concentration of 0.005 gr/dscf or less, and vertical discharge of air contaminants at an adequate stack height and exit velocity for suitable atmospheric dispersion was previously determined to meet BACT and T-BACT for coil coating operations on the Paint Line at this facility.

8.d. BACT Determination – Ink Branders (*ADP 96-1907R6*). The use of a process restriction to limit emissions was previously determined to meet the requirements of BACT and T-BACT for the ink branders at this facility. Add-on controls and/or significant process changes have not been required due to the small quantity and fugitive nature of emissions from ink branding at this facility.

8.e. BACT Determination – Electrostatic Oiler (*ADP 96-1907R6*). The use of low VOC materials and an application process which does not volatize coil oil was previously determined to meet the requirements of BACT for the electrostatic oiler at this facility.

8.f. BACT Determination – Metal Coating Line Roll Coater H (*ADP 96-1907R6*). The use of a wet scrubber capable of providing an exhaust gas opacity of zero percent, an exhaust gas particulate matter concentration ≤ 0.004 gr/dscf, and a control efficiency of ≥ 99% was previously determined to meet the requirements of BACT and T-BACT for roll coating at this facility.

Other Determinations

8.g. Prevention of Significant Deterioration (PSD) Applicability Determination. 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.h. 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 permit.

9. AMBIENT IMPACT ANALYSIS

9.a. TAP Small Quantity Review. 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.

Conclusions

9.b. Installation of a solvent recycling system, as proposed in ADP Application CO-1079, 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. Installation of a solvent recycling system, as proposed in ADP Application CO-1079, 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. Installation of a solvent recycling system, as proposed in ADP Application CO-1079, 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 23-3606 in response to ADP Application CO-1079. ADP 23-3606 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

10.a. Supersession of Previous Permits. ADP 23-3606 supersedes ADP 13-3070 in its entirety.

10.b. General Basis. Permit requirements for equipment affected by this permitting action incorporate the operating schemes proposed by the applicant in ADP Application CO-1079. 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 individual processes are based on the maximum potential emissions calculated in Section 6 of this Technical Support Document.

10.c. Monitoring and Recordkeeping Requirements. ADP 23-3606 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. Recordkeeping provisions have been designed to comply with the requirements of applicable New Source Performance Standards (NSPS). Specific monitoring requirements are established for maintenance activities, coating consumption, fuel consumption, hours of operation, emission testing/monitoring results, and material throughput.

10.d. Reporting Requirements. ADP 23-3606 establishes general reporting requirements for air emissions, upset conditions and excess emissions. Specific reporting requirements are established for coating consumption, fuel

consumption, hours of operation, emission testing/monitoring results, and material throughput. Routine reports are to be submitted on a semi-annual basis.

10.e. Metal Coating Line – Roll Coaters. SWCAA has previously determined that the use of low VOC coatings and roll coater application meets the requirements of BACT and T-BACT for these emission units. These units are subject to 40 CFR 60 Subpart TT "Standards of Performance for Metal Coil Surface Coating", and comply through the use of low VOC coatings as specified by that regulation.

10.f. Solvent Recycling System. The Clean Planet AC 150 solvent recycling system is a self-contained package unit that draws in paint waste from attached totes and deposits concentrated waste and clean solvent into storage drums. The system is completely automated and monitors material input and output for later analysis. Steelscape is required to operate the system in accordance with manufacturer's specifications and store all waste and solvent in enclosed containers.

10.g. Facility-wide Emission Limits. This facility is classified as an synthetic minor for the purposes of Title V applicability due to a voluntary facility-wide emission limit on HAP emissions. The facility-wide emission limits restrict overall facility HAP emissions to a level lower than the sum of emission limits for individual emission units. The existing facility-wide emission limit for HAP will be carried forward by this permitting action, and the facility will remain a synthetic minor.

10.h. Requirements for Unmodified Emission Units. Permit requirements for existing emission units not affected by ADP Application CO-1079 are carried forward unchanged from ADP 13-3070.

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 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 5% opacity or less during normal operation. However, the engine is not capable of reliably limiting visible emissions to less than 5% opacity until the engine achieves normal operating temperature. Therefore, the 5% opacity limit shall not apply to the generator exhaust during start-up periods.

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 permit requirements.

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 permit requirements.

12. EMISSION MONITORING AND TESTING

12.a. Emission Testing – Pickle Line Scrubber. Steelscape is required to emission test the Pickle Line Scrubber (S1) at least once every five years for the purposes of demonstrating compliance with applicable emission limits. All emission testing shall be conducted in accordance with the provisions of ADP 23-3606, Appendix C.

12.b. Emission Testing – General Equipment. Steelscape is required to emission test each of the emission points listed below at least once every ten years for the purposes of demonstrating compliance with applicable emission limits. All emission testing shall be conducted in accordance with the provisions of ADP 23-3606, Appendix C.

- Cold Rolling Mill Mist Eliminator (S3)
- Metal Coating Line Cleaning Scrubber (S5)
- Metal Coating Line Furnace (S6)
- Metal Coating Line Roll Coater Mist Eliminator (S8)
- Paint Line Cleaning Scrubber (S9a)
- Roll-on Pretreatment Mist Eliminator (S9b)

12.c. Emission Testing – Process Boilers. Steelscape is required to conduct emission testing for the Process Boilers (S4) at least once every five years for the purposes of demonstrating compliance with applicable emission limits. All emission testing shall be conducted in accordance with the provisions of ADP 23-3606, Appendix B.

12.d. Emission Testing – Paint Line Thermal Oxidizer. Steelscape is required to emission test the Paint Line Thermal Oxidizer (S10) at least once every two years for the purposes of demonstrating compliance with applicable emission limits. All emission testing shall be conducted in accordance with the provisions of ADP 23-3606, Appendix A.

12.e. Emission Monitoring – Paint Line Thermal Oxidizer. Steelscape is required to conduct emission monitoring for the Paint Line Thermal Oxidizer (S10) on a monthly basis in accordance with the provisions of ADP 23-3606, Appendix D. Burners in the oxidizer must be tuned on a semi-annual basis.

13. FACILITY HISTORY

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

Permit Number	Application Number	Date	Purpose
13-3070	CO-929	10/16/2013	Installation of resin tower mist eliminator on the S8 Metal Coating Line Roller Coater to remove droplets prior to existing filters. Increase VOC emission limit for Metal Coating Line Roll Coaters.
11-2964	CO-905	3/11/11	Replacement of burners in paint line oven. No increase in annual emissions. Superseded by ADP 13-3070.
96-1907R6	CO-786	3/8/06	Modification of existing permit requirements to accommodate the following actions: • Replacement of Paint Line thermal oxidizer • Installation of new ink branders • Increased operation of electrostatic oiler • Replacement of MCL Passivation Unit with a new roll coater • Increase in emission limit for MCL Roll Coaters A and B Superseded by ADP 11-2964.
96-1907R5	CO-731	11/5/02	Modification of permit requirements for the Paint Line Oxidizer to include monthly emission evaluations for carbon monoxide (CO) and semi-annual burner tuning. Superseded by ADP 96-1907R6.
96-1907R4	CO-721	2/12/02	Installation of a paint mixing station and use of passivation chemicals in the metal coating line roll coater. Superseded by ADP 96-1907R5.

Permit Number	Application Number	Date	Purpose
96-1907R3	CO-623 CO-649	3/21/00	Modification of existing permit requirements for: • Use of a new alkaline cleaning solution in the paint line cleaning tanks • Changes in the PM emission limit for the cold rolling mill mist eliminator (S3) • Changes in the SO_2 and VOC emission limits for the direct-fired furnace located after the alkali cleaning section (S6) • Changes in the hexavalent chromium and PM emission limits for the chemical passivation process (S7) • Use of a new coating material containing hexavalent chromium to be cured in the acrylic resin coating oven (S8) • Changes in the CO, NO_x, VOC, HAP and TAP emission limits for the paint line oxidizer (S10) Superseded by ADP 96-1907R4.
96-1907R2	CO-604	9/17/97	Modification of an exhaust point to an existing shot blast roll texturing system. Superseded by ADP 96-1907R3.
96-1907R1	CO-592	6/18/97	Modification of permit requirements and installation of new emission units. Superseded by ADP 96-1907R2.
96-1907	CO-559	8/26/96	Installation of a steel coil milling and coating facility. Superseded by ADP 96-1907R1.

13.b. Compliance History. A search of source records on file at SWCAA did not identify any outstanding compliance issues at this facility.

14. PUBLIC INVOLVEMENT OPPORTUNITY

14.a. Public Notice for ADP Application CO-1079. Public notice for ADP Application CO-1079 was published on the SWCAA internet website for a minimum of (15) days beginning on August 9, 2023.

14.b. Public/Applicant Comment for ADP Application CO-1079. A (30) day public comment period was provided for this permitting action pursuant to SWCAA 400-171(3) beginning on October 5, 2023. SWCAA did not receive any comment from the applicant or the public during the public comment period for this permitting action.

14.c. State Environmental Policy Act. A complete SEPA checklist was submitted by Steelscape in conjunction with ADP Application CO-1079. After reviewing the checklist, SWCAA has made a Determination of Non Significance (DNS 23-039) concurrent with issuance of ADP 23-3606.