

# Notice of Construction (NOC) Worksheet



<b>Source:</b> Seattle Galvanizing Co Inc.	<b>NOC Number:</b> 12427
<b>Installation Address:</b> 18520 67th Avenue NE,   Arlington, WA 98223	<b>Registration Number:</b> 30473
<b>Contact Name:</b> Hadi Mirzai	<b>Contact Email:</b> <a href="mailto:hadi@seattlegalvanizing.com">hadi@seattlegalvanizing.com</a>
<b>Applied Date:</b> 01/12/2024	<b>Contact Phone:</b> (206) 783-3100
<b>Engineer:</b> Madeline McFerran	<b>Inspector:</b> Rain Yates

## A. DESCRIPTION

### For the Order of Approval:

Small parts hot dip spin galvanizing facility for zinc coating of steel and iron consisting of one 1 ton/hr 10'x3'x6' (1841 gallon) galvanizing kettle controlled by one 10,000 scfm dust collector, one permit exempt 11'x3'x6' hydrochloric acid solution pickling tank, and permit exempt zinc aluminum chloride fluxing, caustic surface prep and rinsing tanks and 2 MMBtu/hr natural gas-fired galvanizing furnace.

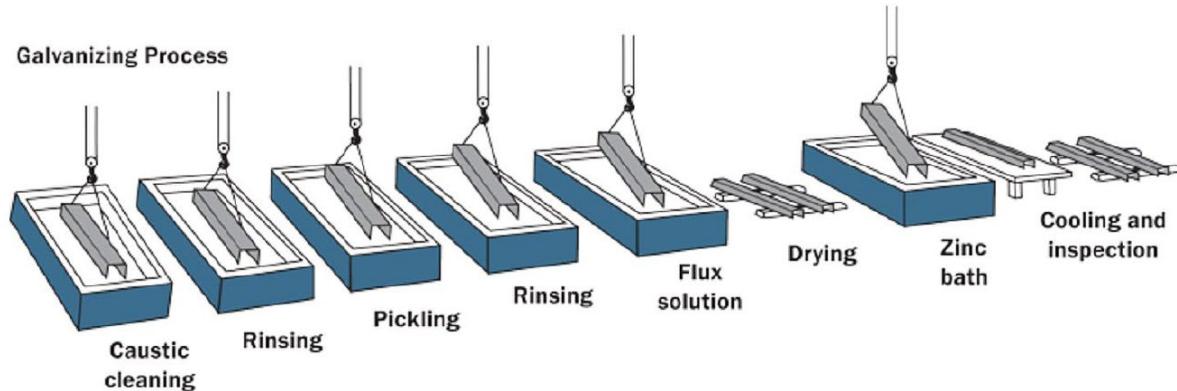
### Additional Information (if needed):

#### Facility

This review is for a new galvanizing facility focusing on small parts. Hot dip galvanizing is the process of applying a zinc coating to fabricated steel and iron structures and parts by immersing them in a molten zinc bath, creating a metallurgical bond to the metal. The galvanized coating provides both barrier and cathodic protection against corrosion.

#### Proposed Equipment/Activities

The galvanizing process is shown below:



Caustic Cleaning: sodium hydroxide solution exempt per PSCAA Regulation I 6.03(c)(21); contains no VOC, no acids and allowed caustic sodium hydroxide "in any concentration" The material typically sits in the degreasing tank for about 15 minutes.

Caustic Rinse: Exempt from NOC review per PSCAA Regulation I 6.03(c)(21) for “associated rinse tanks” for the exempt caustic tank. Parts are dipped in and then out.

Pickling: hydrogen chloride solution (15% by weight assumed in calculations, SDS indicates 10% by weight, follow-up from applicant on 3/20/24 specified that exemption will apply) 33 sq ft surface area, exemption of PSCAA Regulation I 6.03(c)(21) which exempts from permitting equipment used exclusively for surface preparation, passivation and deoxidation containing less than 12% hydrochloric acid. Tank is at 15.6 degrees C (60 degrees F; not heated). The parts are pickled for between 15-25 minutes.

11' long by 3' wide and 6' deep  
8"-10" freeboard

Rinsing: exempt per PSCAA Regulation I 6.03(c)(21). Parts are dipped in and then out.

Flux Solution: zinc aluminum chloride solution exempt per PSCAA Reg I 6.03(c)(21). Parts are dipped in and then out.

Drying: assumes no emissions

Zinc Bath: in galvanizing kettle, primary source of particulate emissions. The kettle has a maximum throughput of 2,000 pounds per hour, which includes baskets holding the small parts for galvanizing. The kettle can process up to 3 baskets in an hour, with each basket weight 50-75 lbs, for an upper end of steel weight of ~1,850 lbs. The parts remain in the bath for 4-10 minutes maximum.

#### Cooling & Inspection

Heat for process is supplied by 2.0 MMBtu/hr natural gas fired furnace, exempt per PSCAA Regulation I 6.03(c)(1)(A)

#### Permit History

Seattle Galvanizing operates a separate facility under Reg 29615 at 6010 199<sup>th</sup> St in Arlington. Operations at 29615 are independent of this facility and will not be affected by this order.

This is the first permit for Registration #30473.

#### B. DATABASE INFORMATION

▲ Source:  
30473 - Seattle Galvanizing Co Inc. x ▾  
▲ Basic Equipment  
Count: 5

Reg	Name	Item #	NC/N...	BE Code	▲	Year In...	Units Installed	Rated Capacity	Rated U...	Primary Fuel Code	Comments
30473	Seattle Galvanizing Co I...	5	12427	28 - galvanizing		2024	1	1846.00	Lb/Hr	1 - Natural Gas	small parts galvanizing kettle
Associated Control Equipment											
Item # CE Code Currently Linked? Link Created Link Removed Comments											
1	100 - Baghouse			✓	3/8/2024			US Air Filtration 1313PT-96-6 pulse jet, A/C 4.7:1			
30473	Seattle Galvanizing Co I...	1	12427	44 - pickling tank		2024	4	2178.00	Cu Ft		Tanks 3, 4, 5, and 6 , 15% HCl
30473	Seattle Galvanizing Co I...	4		61 - storage tank		2024	1	198.00	Cu Ft		Zinc ammonium chloride flux
30473	Seattle Galvanizing Co I...	2		61 - storage tank		2024	3				Rinse tanks (water) #2,7 and 8
30473	Seattle Galvanizing Co I...	3		61 - storage tank		2024	1				Caustic soda cleaning tank (#

<b>New NSPS due to this NOCOA?</b>	<b>No</b>
<b>New NESHAP due to this NOCOA?</b>	<b>No</b>
<b>New Synthetic Minor due to this NOCOA?</b>	<b>No</b>

40 CFR 63 Subpart CCC applies to steel pickling with HCl at HAP major facilities. Facility-wide PTE of total HAP is under 1 ton; therefore, Subpart CCC does not apply.

## C. NOC FEES AND ANNUAL REGISTRATION FEES

### NOC Fees:

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

Fee Description	Cost	Amount Received (Date)
Filing Fee	\$ 3,000	
Equipment (galvanizing kettle, pickling tank, baghouse)	\$3,000	
Public Notice*	\$750	
Filing received		\$ 3,000 (1/12/24)
Additional fee received		\$3,000 (2/23/24) \$750 (TBD)
<b>Total</b>		<b>\$6,000</b>

\*publication costs to be invoiced following publication

### Registration Fees:

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

<b>Applicability</b>		
Regulation I	Description	Note
Reg I, 5.03(a)(6)	Facilities with particulate control equipment >2,000 cfm	10,000 cfm dust collector on galvanizing kettle
Reg I, 5.03(a)(8)(G)	Facilities with galvanizing operations	
<b>Annual Registration Fee</b>		
Regulation I	Description	Fee
Reg I 5.07(c)	Base fee for registration	\$1350
		<b>Total =</b> \$1350

#### **D. STATE ENVIRONMENTAL POLICY ACT (SEPA) REVIEW**

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

The city of Arlington is the SEPA lead agency for this project and issued the associated MDNS on June 6, 2024. A copy of this MDNS is included in the NOC file. This NOC is being issued after the date that the MDNS became final. The city of Arlington also issued Special Use Permit PLN #1145 for this project.

#### **E. TRIBAL CONSULTATION**

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

This project does not meet any of the criteria for consultation listed in Section II.A of the Agency's Interim Tribal Consultation Policy.

#### **F. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW**

##### **Best Available Control Technology (BACT)**

New stationary sources of air pollution are required to use BACT to control all pollutants not previously emitted, or those for which emissions would increase as a result of the new source or modification. BACT is defined in WAC 173-400-030 as, "an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under Chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is

achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant."

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

#### **Best Available Control Technology for Toxics (tBACT)**

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

#### Similar Permits

PSCAA has issued one permit for a galvanizing kettle in the last five years. Prior to that permit, the last galvanizing kettle was permitted in 2016 for the other Seattle Galvanizing location (NOC 10915). BACT for 10915 is included here informationally, however the age of the BACT determination will be considered in the review.

NOC (date issued)	Description	BACT limits
11842 (5/22/20)	750 gallon galvanizing kettle for zinc coating of steel and iron	<ul style="list-style-type: none"><li>• 99.99% total particulate matter control through use of dust collector</li><li>• Kettle operation within enclosure (updated conditions pertaining to enclosure in NOC 12170 issued 10/1/21)</li><li>• Zero visible emissions from dust collector exhaust stack</li><li>• Good practices associated with galvanizing operations: no pre-flux materials in kettle, negative pressure of enclosure during material transfer</li></ul>
10915 (9/29/16)	483 ton galvanizing kettle for zinc coating of steel and iron	<ul style="list-style-type: none"><li>• Zero visible emissions from dust collector stack (except water vapor)</li><li>• Zero visible emissions from beyond galvanizing building perimeter except water vapor</li><li>• 0.01 gr/dscf exhaust grain loading from dust collector on 3 hr average</li><li>• Good practices associated with galvanizing operations: no pre-flux materials in kettle, negative pressure of enclosure during material transfer</li></ul>

Other Regulatory Agencies BACT

Agency (Date)	Description	BACT Limits
Spokane Regional Air Clean Air Agency (2016)	12.5 ton/hr galvanizing operation with 6 MMBtu/hr natural gas fired furnace	<ul style="list-style-type: none"> <li>Throughput limit on maximum daily ton/day (126 ton/day) in lieu of add on particulate controls</li> <li>Furnace burner limits of 30 ppmv for NOx and 50 ppmv for CO (both @ 3% O<sub>2</sub>)</li> </ul>
RBLC KY-0115 (2021)	Steel mini mill with HCl pickling and galvanizing line	<ul style="list-style-type: none"> <li>Pickling tanks equipped with hoods routed to scrubber system (6 ppmv HCl emission limit at outlet)</li> <li>0.1 lb/hr limit on total PM, PM10 and PM2.5, good work practices plan for zinc dip galvanizing</li> </ul>
TCEQ (10/1/2018)	Zinc Kettle	<p>No additional controls required for MSS operations beyond normal operation BACT requirements (see 10 Year BACT). No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.</p> <p>Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.</p>
TCEQ 10 Old BACT Galvanizing (2008)	Zinc Kettle Galvanizing with HCl pickling tanks	<ul style="list-style-type: none"> <li>PM: Emissions capture system meets ACGIH design, 99% reduction of emissions and an outlet grain loading ≤ 0.01 gr/dscf, 5% opacity at stack, separate ammonia chloride preflux tan</li> <li>HCl tank: 90% reduction in emissions (typically achieved by fume suppressant or equivalent)</li> </ul>

MassDEP TOP CASE BEST AVAILABLE CONTROL TECHNOLOGY (BACT) GUIDELINES – COMBUSTION SOURCES

GALVANIZING OPERATIONS (June, 2011)			
Source Type	Air Contaminant	Minimum Requirements	BACT Determination
Zinc Kettle	PM	<ul style="list-style-type: none"> <li>• 95% Capture Efficiency (PTE-Method 204)*</li> <li>• 99.99% collection efficiency, achieved with a FF/BH equipped with lime pre-coated bags.</li> <li>• Emission Limit <math>\leq 0.003</math> gr/dscf</li> <li>• No Opacity from stack exhaust (0 percent)</li> <li>• Separate ammonia chloride preflux tank.</li> </ul>	MACT 40 CFR 63 Subpart CCC
HCl Tanks	HCl	<ul style="list-style-type: none"> <li>• 98% control efficiency utilizing fume suppressant or equivalent</li> </ul>	

\*Capture efficiency determined by US EPA Method 204 for Permanent Total Enclosures (PTE). PTE criteria:

- any natural draft opening (NDO) is at least four equivalent opening diameters from each pollutant emitting point;
- the total area of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling;
- the average face velocity (FV) of air through all NDOs shall be at least 3600 m/hr (200 fpm). The direction of air flow through all NDOs shall be into the enclosure;
- all access doors and windows whose areas are not included in the method and are not included in the calculation are closed at all times during routine operation of the process;
- all PM and HCl emissions are captured and contained for discharge through a control device.

40 CFR 63 Subpart CCC does not apply at this facility but does represent MACT standards for HAP major sources conducting pickling.

### Analysis

Capture of emissions from the kettle are proposed to be controlled from a flanged elevated peripheral fume extraction system with extraction slot and an extraction rate of 10,000 cfm. The peripheral slot is situated 2' 10" above the top of the kettle. The extraction slot is estimated at 6" wide and running the length of the kettle. TCEQ BACT requires that capture systems be designed per ACGIH design (American Conference of Governmental Industrial Hygienists).

The 30<sup>th</sup> edition design manual for ACGIH Table 6-2 specifies recommended capture velocities for average motion dispersion processes (examples listed include plating and pickling), and specifies a range of 100-200 ft/minute capture velocity for those processes.

The applicant included design information from the manufacturer and the calculated capture velocity as shown below:

Marie,

Using 'Industrial Ventilation a Manual for Industrial Practice', 24<sup>th</sup> Edition, for a flanged slot design and an aspect ratio of less than 0.2 then  $Q=2.6LVX$   
 $Q$  is Volume flow  $\text{Ft}^3/\text{Min}$  (10,000 CFM)

$L$  is Length of slot (10')

$V$  is capture Velocity at point X

$X$  is width of kettle (3')

Aspect ratio is  $W/L = 5''/120'' = 0.04$

Based on the above the capture velocity is 128.2  $\text{Ft}/\text{min}$ .

Best regards

Chris

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The face velocity falls within the range specified in ACGIH 30<sup>th</sup> edition manual. While the face velocity is at the lower end, there are not anticipated to be many cross drafts in the building impacting the collection efficiency of the local exhaust system and the applicant also provided an example video of a similar design in operation directing galvanizing fumes to the dust collector.

For capture efficiency standards, similar determinations have required:

- 95% capture efficiency, determined by EPA Method 204 for permanent total enclosure
- Kettle operation within enclosure
- Exhaust system follows ACGIH designs

Calculations utilized a 95% capture efficiency to be achieved through use of a fume hood with the proposed design, consistent with the BACT determination from NOC 11842. The analysis focuses on the collection efficiency of the local exhaust system (the flanged slotted hood) rather than any enclosure provided by the building for collecting emissions and routing them through the control device. As such, Method 204 is not proposed for compliance demonstration in this case.

Once collected, for control efficiency standards, similar determinations have required either or both outlet grain loading or control efficiency:

- 0.003 gr/dscf outlet grain loading
- 0.01 gr/dscf outlet grain loading
- 99.99% control efficiency
- 99% control efficiency

The applicant has proposed use of one dust collector at 10,000 cfm with an outlet particulate grain loading of at or below 0.005 gr/dscf, however specified by email on January 24, 2024 that "the baghouse will meet 0.003 gr/dscf outlet."

### Recommendations

BACT for the galvanizing kettle will be a capture efficiency of at least 95% to be achieved through design specification and an outlet dust collector maximum concentration of 0.003 gr/dscf outlet. Manufacturer specifications will need to be maintained on-site to document the collection efficiency of the dust collector for galvanizing fumes. Given the relatively low uncontrolled emissions, source testing is not required for compliance demonstration.

#### Summary BACT/tBACT determination

Pollutant	Available Method That Meets BACT	Implementation of Method
PM/trace metallic TAP	Galvanizing kettle controlled by dust collector with at least 95% capture efficiency and maximum outlet concentration of 0.003 gr/dscf	Capture efficiency: hood and duct manufacturer specifications  Outlet concentration: manufacturer specifications If requested by PSCAA, stack testing with EPA Method 5 and PSCAA 540

#### G. EMISSION ESTIMATES

##### Proposed Project Emissions

The applicant provided project emissions from the various tanks: 4 HCl pickle tanks (exempt from permitting) and the galvanizing kettle from the TCEQ Calculations Guidance Package for Hot Dip Galvanizing.

The applicant utilized the TCEQ 50% control for the building.

For the galvanizing kettle, the TCEQ Calculations utilize 0.52 lb/ton Zinc Kettle Emission Factor from "Emissions from Hot-Dip Galvanizing Processes Final Report EPA – 905/4-76-002, 1976"

Other methodologies for permitting of galvanizing (NOC 11842) have utilized EPA's FIRE database uncontrolled emission factor for PM of 5.0 lb/ton of zinc used in galvanizing operation. Zinc consumption during galvanizing is estimated at 6% of the weight of metal processed, which would correlate to a factor of 0.3 lb/ton.

Other galvanizing processes permitted by PSCAA (NOC 11842) have utilized results from EPA's 1993 SPECIATE program to estimate TAP emissions from galvanizing. WebFIRE identifies the cadmium emission factor from the 1993 SPECIATE program for galvanizing which was also used in the 1993 EPA report *Locating and Estimating Air Emissions from Sources of Cadmium and Cadmium Compounds, Final Report*. EPA-454/R-93-040. U.S. Environmental Protection Agency. Research Triangle Park, North

Carolina. The other SPECIATE factors were adopted in an Australian emission factor guide (NPI) accessed here: [fgalvan.pdf \(unitar.org\).](http://fgalvan.pdf (unitar.org).)

The underlying programming for the 1993 SPECIATE results could not be downloaded (EPA SPECIATE Access tables are available from 2006 (SPECIATE Version 4.0)). Current version (5.3) of SPECIATE lists only zinc species for galvanizing. The 1993 SPECIATE results utilized in the NPI for Australia are not utilized for this permit review.

#### Actual Emissions

Actual emissions are anticipated to be below the 8760 annual production hours calculated in the potential emissions below.

#### Potential Emissions

The permitted potential to emit calculations are based on 8086 TPY galvanized product, which was determined from a maximum hourly production of 1,846 lbs/hr conducted 8,760 hours per year. The basis of the maximum hourly production an estimate based on the maximum of 3 baskets that could fit in the kettle at once with each basket in the 50-75 lb range and 4-10 minutes in the galvanizing tank for a batch.

For conservatism, PSCAA updated the applicant's calculations which utilized a 99% control efficiency on the building for fugitive emissions to 0% control efficiency for the 5% fugitive emissions estimated to not be collected by the dust collector.

### **Galvanizing/Kettle Uncontrolled Emissions**

#### **Galvanizing Facility Parameters**

HP = Maximum Hourly Production in Pounds/Hour of Galvanized Product (lbs/hr)	1846
AP = Maximum Annual Production in Tons/Year of Galvanized Product (tpy)	8086
AH = Maximum Annual Operating Hours Per Year (hrs/yr)	8760
EF = Zinc Kettle Emission Factor (lbs/ton) <sup>4</sup>	0.52
EH = Hourly Uncontrolled PM10 Emissions (lbs/hr)*	0.5
EA = Annual Uncontrolled PM10 Emissions (tpy)**	2.1

### **Galvanizing/Zinc Kettle Controlled Emissions**

#### **Galvanizing Facility Parameters**

EH = (See Previous Table) (lbs/hr)	0.5
EA = (See Previous Table) (tpy)	2.1
CE = Kettle Hood Capture Efficiency (%)	95
AE = Control Device Efficiency (%)	99
Building Control Efficiency	0
EHC = Hourly Controlled PM10 Emissions (lbs/hr)*	0.005
EAC = Annual Controlled PM10 Emissions (tpy)**	0.020
FH = Hourly Fugitive PM10 Emissions (lbs/hr)***	0.024
FA = Annual Fugitive PM10 Emissions (tpy)****	0.105

Total PM10 (lbs/hr), controlled	0.029
Total PM10 (tpy), controlled	0.125

## VII. Speciated Zinc Kettle

### (a) Hourly Controlled

Contaminant	Percentage in Decimal	lb/hr
PM <sub>10</sub>	1.00	> 0.0286
NH <sub>4</sub> Cl	0.68	> 0.0194
ZnO	0.16	> 0.0046
ZnCl <sub>2</sub>	0.04	> 0.0011
Zn	0.05	> 0.0014
NH <sub>3</sub>	0.01	> 0.000046

## Facility-wide Emissions

For this project, facility-wide emission will be the same as project emissions but also includes the estimated emissions from the exempt 2 MMBtu heater and the exempt HCl tanks:

AFUG = Annual HCl fugitive emission rate (tons/year)	0.048
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## Heater Criteria Pollutant Emissions:

Species	lb/yr	ton/yr
Carbon monoxide	1442.82	0.72
Nitrogen dioxide	1717.65	0.86
PM, total	130.54	0.07
Sulfur dioxide	10.31	0.01
Volatile organic compounds (VOC)	94.47	0.05
Lead & compounds, NOS	0.01	4.29E-06

The source is not a reporting source; PTE is below the thresholds of PSCAA Regulation I, Article 5.

## H. OPERATING PERMIT OR PSD

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

The facility is not a Title V air operating permit source because post project PTE remains below Title V applicability thresholds and criteria. The source is considered a “**natural minor**”.

## I. AMBIENT TOXICS IMPACT ANALYSIS

The estimated potential toxic air pollutant (TAP) emissions at operating at 100% rated capacity and 8760 hour per year for each new or modified emission unit. The table below includes estimated potential emissions of all TAP and compares those to the Small Quantity Emission Rates (SQER) in WAC 173-460-150. Anticipated emissions from the galvanizing tank are zinc oxides, ammonium chloride, ammonia, zinc chloride and elemental zinc per the TCEQ speciation for galvanizing emissions. Of the speciated emissions, only ammonia is a TAP. The estimated ammonia emissions from the galvanizing kettle are  $4.6 \times 10^{-5}$  lb/hr, corresponding to 0.001 lb/day, below the ammonia SQER of 37 lb/day.

Based on comments to the City of Arlington received during the City of Arlington public comment and hearing for PLN-1145, PSCAA completed screening modeling of ammonia emissions as well as PM10 emissions to assess whether the specific topography of the location of the facility would affect ambient concentrations for both WAC 173-460 air toxics and the WAC 173-400-113 4(a) Cause or Contribute values for PM10 NAAQS. The model utilized the site specific topography from USGS National Elevation Dataset and modeled the dust collector stack and associated building. The model conservatively used worst case meteorological data from MAKEMET for urban land use with average moisture. A 1 lb/hr emission rate was modeled and then the resulting concentrations were scaled for the emission rates identified for PM10 and for ammonia. Results indicate ambient concentrations of ammonia below acceptable source impact level (ASIL) and concentrations of PM10 modeled below Cause or Contribute values.

Maximum air impacts occurred 72 meters SW from the facility. The concentration of ammonia and of PM10 at that location is compared with ASIL and SIL values, respectively. The modeled concentrations were below the WAC 173-400-113 4(a) Table of Cause or Contribute values and the analysis indicates that the proposed project will not be considered to cause or contribute to a violation of an ambient air quality standard. Modeled concentrations of ammonia were below the ASIL value and meet requirements of WAC 173-460.

Species	lb/hr	avg period	modeled ug/m <sup>3</sup>	ASIL ug/m <sup>3</sup>
Ammonia	0.00005	24-hr	0.16	500

	Annual	24-Hr Avg	
		ug/m <sup>3</sup>	
4a Threshold	1	5	
Modeled Conc.	0.7	4	

## J. APPLICABLE RULES & REGULATIONS

### Puget Sound Clean Air Agency Regulations

**SECTION 5.05 (c):** The owner or operator of a registered source shall develop and implement an operation and maintenance plan to ensure continuous compliance with Regulations I, II, and III. A copy of the plan shall be filed with the Control Officer upon request. The plan shall reflect good industrial practice and shall include, but not be limited to, the following:

- (1) Periodic inspection of all equipment and control equipment;
- (2) Monitoring and recording of equipment and control equipment performance;
- (3) Prompt repair of any defective equipment or control equipment;
- (4) Procedures for startup, shut down, and normal operation;
- (5) The control measures to be employed to ensure compliance with Section 9.15 of this regulation; and
- (6) A record of all actions required by the plan.

The plan shall be reviewed by the source owner or operator at least annually and updated to reflect any changes in good industrial practice.

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

**SECTION 9.03:** (a) It shall be unlawful for any person to cause or allow the emission of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is:

- (1) Darker in shade than that designated as No. 1 (20% density) on the Ringelmann Chart, as published by the United States Bureau of Mines; or
- (2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Section 9.03(a)(1).

(b) The density or opacity of an air contaminant shall be measured at the point of its emission, except when the point of emission cannot be readily observed, it may be measured at an observable point of the plume nearest the point of emission.

(c) This section shall not apply when the presence of uncombined water is the only reason for the failure of the emission to meet the requirements of this section.

**SECTION 9.09:** General Particulate Matter (PM) Standard. It shall be unlawful for any person to cause or allow the emission of particulate matter in excess of the following concentrations:

Equipment Used in a Manufacturing Process: 0.05 gr/dscf

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

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

**SECTION 9.15:** It shall be unlawful for any person to cause or allow visible emissions of fugitive dust unless reasonable precautions are employed to minimize the emissions. Reasonable precautions include, but are not limited to, the following:

- (1) The use of control equipment, enclosures, and wet (or chemical) suppression techniques, as practical, and curtailment during high winds;
- (2) Surfacing roadways and parking areas with asphalt, concrete, or gravel;
- (3) Treating temporary, low-traffic areas (e.g., construction sites) with water or chemical stabilizers, reducing vehicle speeds, constructing pavement or rip rap exit aprons, and cleaning vehicle undercarriages before they exit to prevent the track-out of mud or dirt onto paved public roadways; or
- (4) Covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust-bearing materials.

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

#### **Washington State Administrative Code**

WAC 173-400-040(3): Fallout. No person shall cause or allow the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.

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

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

WAC173-400-111(7): Construction limitations.

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

**Federal**

NA

## K. PUBLIC NOTICE

A notice of application was posted on the Agency's website for 15 days. No requests or responses were received. A copy of the website posting is below:

### List of New Construction Projects

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#### Requests for Public Comment

Requests for a public comment period on a permit application must be submitted within 15 days of its posting.

Submit a written request to the Clean Air Agency via:

- Email: Refer to contact on the permit application
- Fax: 206-343-7522
- [Postal Mail](#)

#### New Construction Projects

Company	Address	Project Description	Date Posted	Contact
				Engineer
Seattle Galvanizing Co Inc.	<a href="#">18520 67th Avenue NE, Arlington, WA 98223</a>	Application to establish a new galvanizing facility to coat small steel or iron parts with zinc. Equipment for this process includes a zinc kettle with a dust collector to control emissions from the zinc coating process and tanks for preparing the steel and iron parts for coating.	1/25/24	<a href="#">Madeline McFerran</a>

Comments received by the City of Arlington during the MDNS comment period and the associated public hearing for PLN-1145 indicated significant public interest in this Notice of Construction permitting action and a 30 day public comment period was held from August 11, 2024 through September 10, 2024. Criteria requiring public notice includes, but is not limited to, a project that exceeds emission threshold rates as defined in WAC 173-400-030 (e.g. 40 tpy NOx, VOC, or SO<sub>2</sub>, 100 tpy CO, 15 tpy PM<sub>10</sub>, 10 tpy PM<sub>2.5</sub>, 0.6 tpy lead), includes a WAC 173-400-091 synthetic minor limit, has a toxic air pollutant emission increase above the acceptable source impact level in WAC 173-460-150, or has significant public interest.

## L. RECOMMENDED APPROVAL CONDITIONS

### Standard Conditions:

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the installation address in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

### Specific Conditions:

3. The galvanizing hot dip kettle must at all times route kettle exhaust through an offset flanged slotted hood the length of the kettle with minimum fan setting corresponding to at least 10,000 scfm exhaust flow. Exhaust from the hood must be ducted continuously and vented to the dust collector.
4. All parts galvanized within the hot dip kettle must be fully contained within the kettle.
5. Flux solution may not be introduced directly into the hot dip kettle.
6. HCl pickling tanks must not contain HCl in greater than 12%
7. There shall be no visible emissions from the dust collector's exhaust stack except for uncombined water vapor.
8. There shall be no visible emissions beyond the galvanizing kettle building except for uncombined water vapor.
9. Total PM Emissions from the galvanizing hot dip kettle dust collector exhaust must not exceed 0.003 gr/dscf, as measured by EPA Method 5 and PSCAA 540. Compliance with this condition shall be demonstrated through filtration performance data. Maintenance and replacement procedures for the filters must be incorporated into the Operations and Maintenance (O&M) plan required by Agency Regulation I, Section 5.09(b).
10. Once each week during which the galvanizing hot dip kettle is operated, the owner or operator shall observe the galvanizing building perimeter during hot dip kettle operation for visible emissions. Once each week during operation of the galvanizing hot dip kettle, the owner or operator shall observe the dust collector's exhaust stack for visible emissions. If visible emissions are observed from either outside of the galvanizing building or the dust collector's exhaust stack, the owner operator shall stop operation of the galvanizing process, determine the cause of the problem including estimating the mean static pressure inside the hood, and take corrective actions. Galvanizing operations may not be resumed until the cause of the visible emissions has been determined and the problem corrected.
11. The hood and ducting system to the dust collector must be maintained free of holes, cracks, and any other structural deficiency that would reduce the capture and collection efficiency of the system. The owner or operator must at minimum conduct inspections every calendar year of the enclosure and ducting system to the dust collector for structural deficiencies. An inspection log

must be kept to record any structural deficiency or corrective action taken by the owner or operator to correct the deficiency. Log records must include descriptions of observations, the date of the inspections and the date of corrective actions.

12. The dust collector must be equipped with an operable pressure gauge to indicate the pressure drop across the bags or filters. The operating pressure drop range shall be established based on manufacturer's recommendations, specifications or instruction, or good air pollution control practices to minimize emissions. The established pressure drop range minimum and maximum values must be clearly marked on or nearby the gauge and documented in the facility O&M plan. Pressure gauge components must be calibrated in accordance with manufacturer instructions and operating manuals. The owner or operator must keep a written copy of manufacturer instructions and operating manuals onsite.
13. The dust collector must always be operated within the established pressure drop range across the exhaust filter bank. Compliance demonstration with this requirement must at a minimum include weekly pressure drop inspections, on days that the hot dip kettle is in operation. If at any time the pressure drop deviates from the established pressure drop range, galvanizing operations shall discontinue after finishing the dip in progress. Galvanizing operations may not resume until the cause of the pressure drop deviation has been determined and the problem corrected. An inspection log must be kept to record any pressure drop deviation from the established pressure drop range and the corrective action taken by the owner or operator to correct the deviation. Log records must include the observed readings, descriptions of corrective actions, the date of the inspections, and the date of corrective actions.
14. Records to be maintained by this Order of Approval shall be kept onsite for at least two years from the date of generation, and made available to Puget Sound Clean Air Agency personnel upon request.
15. The owner or operator shall keep records of all inspections, monitoring, observations, readings and corrective actions as required by this Order of Approval. These records must include at least the following information:
  - a. Log records of enclosure and ducting system inspections required under Condition No. 11.
  - b. Log records of dust collector pressure drop inspections required under Condition No. 13.
  - c. Visible emissions observations required under Condition No. 10.
  - d. Any corrective actions conducted.

#### **M. CORRESPONDENCE AND SUPPORTING DOCUMENTS**

**N. REVIEWS**

Reviews	Name	Date
Engineer:	Madeline McFerran	5/24/24 Update 7/18/24
Inspector:	Rain Yates	5/30/24
Second Review:	John Dawson	5/24/2024 Review of update 7/18/24
Applicant Name:	Hadi Mirzai	6/7/24