Statement of Basis

Permit to Construct No. P-2011.0114
Project No. 62378

Frazier Industrial Co. - Idaho Falls
Idaho Falls, Idaho

Facility ID No. 019-00086

Final

April 15, 2020

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The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EI	emissions inventory
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
FEC	Facility Emissions Cap
Frazier	Frazier Industrial Company
gpm	gallons per minute
gph	gallons per hour
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per year
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides

NSPS	New Source Performance Standards
O&M	operation and maintenance
PAH	polyaromatic hydrocarbons
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SCL	significant contribution limits
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO_2	sulfur dioxide
SO_X	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
U.S.C.	United States Code
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
yd^3	cubic yards
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

Frazier Industrial Company – Idaho Falls (Frazier) manufactures structural steel storage systems. Steel is delivered to the facility and is then cut and welded into product components. The type of welding conducted at the facility is gas metal arc welding or metal inert gas welding. The welded steel components are then bundled and prepared to be coated with paint.

The steel components are coated using a dip tank paint system consisting of three large rectangular steel tanks and one small portable dip tank used to contain the paint. Each dip tank system is internally fabricated. The dip tank system is capable of keeping the paint mixed, filtered and within a predetermined temperature.

Solvent is stored in 55-gallon drums. The solvent is added to the dip tanks to obtain the desired paint viscosity. The solvent is also occasionally used to clean paint from rollers, scrapers and other tools used in the painting operation. The solvent that is used for cleaning is recycled back into the process by being mixed in the dip tanks when needed. Paint is stored in metal mobile totes prior to being placed in the dip tanks. The dip tanks are open when steel is being dipped and are closed when not in use. The facility utilizes a wall exhaust fan to provide building ventilation. The exhaust fan does not control emissions from the building.

Steel components are typically dipped and kept in the dip tank for a minimum of two minutes. Once the steel components are coated, they are hoisted out of the tank and allowed to drain for approximately 25 minutes. Next, a nap paint roller is used to smooth out any excess paint and coat unpainted surfaces. The painted steel components are then sent to the storage area where the finished product is stored until it is shipped to the customer.

Frazier's facility normal operating schedule is: 16 hours per day, 7 days per week 50 weeks per year, and 5,600 hours per year. Due to the nature of the dip tank operation, they are not able to operate continuously.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

September 29, 2011	P-2011.0114 Project 60892, initial PTC for moving the facility from Pocatello to Idaho Falls, Permit status (S)
August 25, 2016	P-2011.0114 Project 61537, PTC revision to change paint usage of different paints (A, but will become S upon issuance of this permit)

Application Scope

This PTC is for a minor modification at an existing minor facility. The applicant has proposed to

- Change color specific coating usage limits to a general coating usage limit,
- Remove brand name of the solvent in the permit,
- Add a small portable dip tank to the emission units list, and
- Slightly increase VOC limit from 98.1 T/yr to 98.6 T/yr as a result of the changes.

Application Chronology

January 30, 2020	DEQ received an application and an application fee.
February 4, & March 12, 2020	DEQ received supplemental information from the applicant.
February 24, 2020	DEQ determined that the application was complete.

March 13, 2020	DEQ made available the draft permit and statement of basis for peer and regional office review.
March 23, 2020	DEQ made available the draft permit and statement of basis for applicant review.
April 8, 2020	DEQ received the permit processing fee.
April 15, 2020	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
T01, T01, T03, T04	Dip Tank 1: Manufacturer: internally fabricated Tank Capacity: 3,636 gallon Dip Tank 2: Manufacturer: internally fabricated Tank Capacity: 1,793 gallon Dip Tank 3: Manufacturer: internally fabricated Tank Capacity: 8,311 gallon Portable Dip Tank Manufacturer: internally fabricated Tank Capacity: 660 gallon Total Paint Usage Limit: 38,000 gallons for all dip tanks Total Solvent Usage Limit: 9,300 gallons for all dip tanks	None	The Stack Exit Height: 39 ft (12 m) Exit Diameter: 2 ft (0.6 m) Exit Flow rate: 8,230 acfm Exit Temperature: ambient temperature
NA	Paint and solvent storage For paint: 330-gallon totes or equivalent fully-enclosed storage containers For solvent: 55-gallon drums or equivalent fully-enclosed storage containers	None	NA

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
W01	Steel Welding Material Usage Limit/Maximum Projected Usage: 200,000 lb/yr wire or welding electrode (S07)	None	Total 20 vents Five vents with the following exhaust parameters: Exit Height: 29 ft (8.8 m) Exit Diameter: 3 ft (0.9 m) Exit Flow rate: 4,840 acfm Exit Temperature: ambient temperature Five vents with the following exhaust parameters: Exit Height: 33 ft (10 m) Exit Diameter: 3 ft (0.9 m) Exit Flow rate: 4,840 acfm Exit Temperature: ambient temperature Five vents with the following exhaust parameters: Exit Height: 30 ft (9.1 m) Exit Diameter: 3 ft (0.9 m) Exit Flow rate: 4,840 acfm Exit Temperature: ambient temperature Five vents with the following exhaust parameters: Exit Height: 27 ft (8.2 m) Exit Diameter: 3 ft (0.9 m) Exit Flow rate: 4,840 acfm Exit Temperature: ambient temperature

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit, an emission inventory was developed for the coating operation at the facility (see Appendix A) associated with this proposed project. Welding emissions remain unchanged. Emissions estimates of criteria pollutant and HAP PTE were based on the proposed coating material usage, the maximum VOC and HAP contents in the coating materials, and other process information specific to the facility for this proposed project.

Uncontrolled Potential to Emit

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The uncontrolled Potential to Emit is used to determine if a facility is a "Synthetic Minor" source of emissions. Synthetic Minor sources are facilities that have an uncontrolled Potential to Emit for regulated air pollutants or HAP above the applicable Major Source threshold without permit limits.

Uncontrolled emissions were estimated in the 2011 PTC and can be found in the SOB for PTC No. P-2011.0114 Project 60892 issued on September 29, 2011. The uncontrolled VOC emissions were greater than 100 T/yr.

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project. The following table presents the pre-project potential to emit for all criteria pollutants and HAP from all emissions units at the facility. It is taken from the SOB for PTC No. P-2011.0114 Project 61537, issued on August 25, 2016.

Table 2 PRE-PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS AND HAP

Source	$PM_{10}/PM_{2.5}$ (T/yr)	Lead (T/yr)	VOC (T/yr)	HAP (T/yr)
Dip Tank 1 [a b c] Orange	---	---	23.81	1.17
Dip Tank 2 [b c] Orange or Yellow	---	---	29.22	1.20
Dip Tank 3 [c] Blue	---	---	45.10	0.36
Welding Total [d e]	0.35	3.5E-05		0.05
Total	**0.35**	**3.5E-05**	**98.13**	**2.78**

a) Solvent is used in all three tanks. Assumed total solvent emissions are divided equally between the three tanks.
b) Yellow paint is occasionally used in Tank #2. Worst case annual tons per year VOC and HAPs assumes orange + yellow + solvent in Tank #2. Worst case hourly lb/hr VOC and HAPs assumes orange + solvent in Tank #2
c) Dip tank stacks will have rain caps - vertical stacks
d) Welding vertical vents will have butterfly closure when fan is not operating
e) Welding emissions will be divided equally between 20 vents; 5 equally spaced down center of each Bay; 5 located throughout building based on ventilation needs.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as submitted by the applicant and reviewed and revised by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS AND HAP

	$PM_{10}/PM_{2.5}$ (T/yr)[b]	Lead (T/yr)	VOC (T/yr)	HAP (T/yr)
Dip Tanks [a]			98.55	8.10
Welding Total	0.35	3.5E-05		0.05
Total	**0.35**	**3.5E-05**	**98.55**	**8.16**

a) Solvent is used in all three tanks. Solvent emissions are included in the dip tanks emissions.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and limits.

The facility has uncontrolled potential to emit for VOC emissions greater than the Major Source threshold of 100 T/yr and a controlled potential to emit for VOC emissions less than the Major Source threshold of 100 T/yr. Therefore, this facility is designated as a Synthetic Minor facility. As demonstrated in Table 3 the facility's PTE for VOC is greater than 80% of the Major Source thresholds of 100 T/yr. Therefore, this facility is designated as an SM80 facility.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required or if emissions modeling may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants and HAP.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS AND HAP

	$PM_{10}/PM_{2.5}$ (T/yr)	Lead (T/yr)	VOC (T/yr)	HAP (T/yr)
Dip Tanks			0.4	5.4
Welding Total	0	0	0	0
Total	**0.00**	**0.00**	**0.4**	**5.4**

TAP Emissions

A summary of TAP increments is provided in the following table. The TAP increments are less than their respective ELs, therefore, modeling is not required.

Pre- and post-project, as well as the change in TAP emissions are presented in the following table:

Table 5 PRE- AND POST PROJECT TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
n-Butyl Alcohol	1.8	4.13	2.33	10	No
Xylene	0.7	2.08	1.38	29	No
Ethyl Benzene	0.15	0.41	0.26	29	No
Stoddard	1.0	0	0	35	No
Cumene	0.1	0.54	0.4	16.3	No
Trimethyl Benzene	10.5	17.83	7.33	8.2	No

Post Project HAP Emissions

Table 3 presents the post project HAP PTE from all emissions units at the facility based on the information in the EI submitted by the applicant and verified by DEQ staff. The HAP PTE is below 10 T/yr.

Ambient Air Quality Impact Analyses

The TAP increments are less than their respective ELs, therefore modeling for TAP compliance is not required. VOC is the only criterial pollutant that has an emissions increase of 0.4 T/yr as a result of this permitting action. Currently, modeling VOC emissions from a stationary source is not required.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Bonneville County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For THAPs (Total Hazardous Air Pollutants) Only:

A = Use when any one HAP has actual or potential emissions $\geq$ 10 T/yr or if the aggregate of all HAPS (Total HAPs) has actual or potential emissions $\geq$ 25 T/yr.

SM80 = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the permit sets limits $\leq$ 8 T/yr of a single HAP or $\geq$ 20 T/yr of THAP.

SM = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the potential HAP emissions are limited to < 8 T/yr of a single HAP and/or < 20 T/yr of THAP.

B = Use when the potential to emit without permit restrictions is below the 10 and 25 T/yr major source threshold

UNK = Class is unknown.

For All Other Pollutants:

A = Actual or potential emissions of a pollutant are > 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are < 80 T/yr.

B = Actual and potential emissions are < 100 T/yr without permit restrictions.

UNK = Class is unknown.

Table 6 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	< 100	< 100	**100**	B
$PM_{10}/PM_{2.5}$	< 100	< 100	**100**	B
SO_2	< 100	< 100	**100**	B
NO_X	< 100	< 100	**100**	B
CO	< 100	< 100	**100**	B
VOC	> 100	80 < VOC emissions <100	**100**	SM80
HAP (single)	< 10	< 10	**10**	B
HAP (Total)	< 25	< 25	**25**	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed changes. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401..... Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625..... Visible Emissions

The sources emitting particulate matter at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Condition 2.4.

Odors (IDAPA 58.01.01.775-776)

Frazier is subject to IDAPA 58.01.01.775-776 that requires no emissions of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution. This requirement is assured by Permit Condition 2.5.

Rules for Control of Fugitive Dust (IDAPA 58.01.01.650)

Frazier is subject to IDAPA 58.01.01.650 requiring that all reasonable precautions be taken to prevent the generation of fugitive dust. This requirement is assured by Permit Condition 2.6.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301..... Requirement to Obtain Tier I Operating Permit

The facility has taken a throughput limit to become a synthetic minor source for the Title V program. Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for any criteria pollutants (i.e., $PM_{2.5}$/PM_{10} and VOC) and 10 tons per year for any one HAP or 25 tons per year for all HAPs combined. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006, and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 ..... Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

Frazier is not subject to any NSPS requirements.

NESHAP Applicability (40 CFR 61)

Frazier is not subject to any NESHAP requirements in 40 CFR 61.

NESHAP Applicability (40 CFR 63)

Frazier is not subject to any NESHAP requirements in 40 CFR 63. Non-applicable determination on Subpart XXXXXX and Subpart MMMM can be found in the SOB for PTC No. P-2011.0114 PROJ 61537 issued on August 25, 2016.

Permit Conditions Review

This section describes those permit conditions that have been added, revised, modified, or deleted as a result of this permitting action.

Permit Condition 1.1 describes the scope of this permitting action.

Permit Condition 1.3 states that this PTC replaces PTC No. P-2011.0114 Project 61537, issued on August 25, 2016.

Table 1.1 and Table 2.1 are revised to include the total paint and solvent usage limits and to include the portable dip tank.

Permit Condition 2.1 process description is updated.

Permit Condition 2.3 is revised to increase the VOC emissions limit from 98.1 T/yr to 98.6 T/yr.

Permit Condition 2.8 and Table 2.2

Permit Condition 2.8 and Table 2.2 are revised to reflect the proposed changes - change color specific coating usage limits to a general coating usage limit and remove brand name of the solvent in the permit.

Permit Condition 2.9 and Table 2.3 are revised to ensure compliance with the VOC emissions limit, to ensure that TAP increments are less than their respective ELs, and to ensure that HAP emissions are less than the major source thresholds.

VOC

In the EI spreadsheet, the VOC emissions are calculated as: [(proposed paint usage 38,000 gal/yr paint) * (worst case paint VOC content of 3.4 lb/gal) + (9,300 gal/yr solvent) * (worst case solvent VOC content of 7.30 lb/gal)] / (2000 lb/T) = 98.6 T/yr. Permit Condition 2.8 has established coating and solvent throughput limits as 38,000 gal/yr paint and 9,300 gal/yr solvent. Permit Condition 2.9, Table 2.3 has limited maximum paint VOC content to 3.4 lb/gal and maximum solvent VOC content to 7.30 lb/gal.

TAP

In the EI spreadsheet, hourly coating usage rate is assumed to be 9.0 gal/hr between all dip tanks with worst case paint density of 10.5 lb/gal and 1.7 gal/hr of solvent with worst case solvent density of 7.30 lb/gal between all dip tanks. 24-hr average emission rate assumes 3 shifts actively painting for 7 hrs per shift (21 hr/day)

For each TAP, the 24-hour average TAP emissions are calculated as:[(worst case TAP wt% of all currently used paints) * (worst case paints density of 10.5 lb/gal) * 9 gal/hr + (worst case TAP wt% of currently used solvent) * (worst case solvent density of 7.3 lb/gal) * 1.7 gal/hr] * (21 hr/24 hr). Permit Condition 2.9, Table 2.3 has established the TAP content limit in lb/gal that equals to [(worst case TAP wt% of all currently used paints) * (worst case paints density of 10.5 lb/gal)] for paints and that equals to [(worst case TAP wt% of currently used solvent) * (worst case solvent density of 7.3 lb/gal)] for solvent.

Total HAP

The total HAP content in lb/gal is the sum of each individual HAP content in lb/gal in every paint and in every solvent. Individual HAP content in lb/gal can be calculated by multiplying the coating material density (i.e., a paint density, or a solvent density) in lb/gal to the maximum weight fraction of the HAP.

In the EI spreadsheet, the worst case HAP wt%, worst case coating density of 10.5 lb/gal, and worst case solvent density of 7.3 lb/gal are used. The limits used in Table 2.3 are taken from the EI spreadsheet.

Permit Condition 2.10

“weight fraction” in PC 2.10 is changed to “content” due to the change made in Table 2.3.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was not a request for a public comment period on DEQ’s proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

FRAZIER INDUSTRIAL COMPANY
IDAHO FALLS, ID

PRE-PROJECT POTENTIAL TO EMIT

Emissions Unit	PM-10/PM-2.5 T/yr	Lead T/yr	VOC T/yr	HAP T/yr
Dip Tank 1 Orange			23.81	1.17
Dip Tank 2 Orange or Yellow			29.22	1.20
Dip Tank 3 Blue			45.10	0.36
Welding	0.35	3.50E-05		0.05
Total PTE	0.35	3.5E-05	98.13	2.78

Pre-Project emissions as shown in Statement of Basis for PTC No. P-2011.0114, Project No. 61537 issued 8/25/16

POST PROJECT POTENTIAL TO EMIT

Emissions Unit	PM-10/PM-2.5 T/yr	Lead T/yr	VOC T/yr	HAP T/yr
Dip Tank 1 through 3			98.55	8.10
Welding	0.35	3.50E-05		0.05
Total PTE	0.35	3.50E-05	98.6	8.16

CHANGE IN POTENTIAL TO EMIT

Emissions Unit	PM-10/PM-2.5 T/yr	Lead T/yr	VOC T/yr	HAP T/yr
Dip Tank 1 through 3			0.43	5.37
Welding	0.0	0.0		0.00
Total PTE	0.0	0.0	0.43	5.37

[a] Solvent is used in all three tanks. Assumed total solvent emissions are divided equally between the three tanks.

FRAZIER INDUSTRIAL COMPANY
IDAHO FALLS, ID

DIP TANKS
EXISTING PERMITTED COATINGS
VOC and HAP

Volatile Component	CAS No.	Orange Max Wt. Fraction	Blue Max Wt. Fraction	Yellow Max Wt. Fraction	Solvent Max Wt. Fraction
n-Butyl Alcohol	71-36-3	0.026	0.026	0.0102	
Xylene (mixed isomers)	1330-20-7	0.0169			0.022
Ethyl Benzene	100-41-4	0.004		0.0015	
Stoddard	8052-41-3			0.0326	
Cumene	98-82-8				0.010
Trimethylbenzene	95-63-6	0.094	0.10	0.067	0.32
	TOTAL VOC	0.3176	0.316	0.259	0.352
	TOTAL HAP	0.0205	0.0000	0.0015	0.0320
Throughput Limit (gal/yr):		**15,000**	**20,500**	**4,000**	**9,300**

DIP TANKS
PROPOSED PERMITTED COATINGS
VOC and HAP

Volatile Component	CAS No.	Worst Case Coating Max Wt. Fraction	Worst Case Solvent Max Wt. Fraction	Worst Case Coating Max Content lb/gal	Worst Case Solvent Max Content lb/gal
n-Butyl Alcohol	71-36-3	0.050		0.525	
Xylene (mixed isomers)	1330-20-7	0.019	0.050	0.195	0.365
Ethyl Benzene	100-41-4	0.005		0.053	
Stoddard	8052-41-3				
Cumene	98-82-8	0.000	0.050	0.000	0.365
Trimethylbenzene (mixed and individual)	25551-13-7	0.150	0.50	1.575	3.650
	TOTAL VOC	0.35	1.000		
	TOTAL HAP	0.024	0.100	0.248	0.730
Proposed Throughput Limit (gal/yr):		**38,000**	**9,300**		
Proposed VOC Limit (lb/gal):		**3.4**	**7.30**		
Proposed HAP Limit (lb/gal):		**0.25**	**0.73**		

Response from the applicant on 3/12/2020:
Current vs Prop Coatings
D37- The current solvent VOC weight fraction limit is 0.999; to allow for more flexibility increased to 1.0

C41- Based on review of current paints used at the facility, the maximum VOC lb/gal is 3.4. The current permit lists a VOC weight fraction but since the density can change slightly between the different paints, a lb/gal limit is a more straightforward way to track.

D41- The maximum specific gravity of the solvents that have been used at the facility is 0.875. To convert to lb/gal multiplied by density of water (should be 8.345). Corrected value is 7.30 instead of 7.27.

D42- The maximum specific gravity of the solvents that have been used at the facility is 0.875. To convert to lb/gal multiplied by density of water (should be 8.345). Corrected value is still 0.73

worst case coating density	10.5 lb/gal
worst case solvent density	7.3 lb/gal

FRAZIER INDUSTRIAL COMPANY
IDAHO FALLS, ID

TAP emissions

Pollutant	Pre-Project 24-hour Avg [a, b] (lb/hr)	Post-Project 24-hour Avg [b, d] (lb/hr)	Change in 24-hour Avg (lb/hr)	Non Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
n-Butyl Alcohol	1.8	4.13	2.33	10	No
Xylene	0.7	2.08	1.38	29	No
Ethyl Benzene[c]	0.15	0.41	0.26	29	No
Stoddard	1.0	0.00	0.0	35	No
Cumene	0.1	0.54	0.4	16.3	No
Trimethyl Benzene	10.5	17.83	7.33	8.2	No

a. Pre-project 24-hr average emission rate taken from Statement of Basis for PTC P-2011.0114 issued 8/25/16
b. 24-hr average emission rate assumes 3 shifts actively painting for 7 hrs per shift (21 hr/day)

c. The pre-project emissions for ethyl benzene were incorrectly calculated assuming tank #1 contained orange and tank #2 contained yellow, however worst case emissions occur when both tanks contain orange paint. Pre-project emissions of ethyl benzene should be 0.20 lb/hr.

d. Hourly coating usage rate assumed to be 9.0 gal/hr between all dip tanks with worst case coating density of 10.5 lb/gal and 1.7 gal/hr of solvent @ 7.30 lb/gal between all dip tanks.

worst case coating density	10.5	lb/gal
worst case solvent density	7.3	lb/gal

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on April 2, 2020:

Facility Comment: Frazier has reviewed the draft permit and only has one comment as outlined below.

Appendix A: Update the heading on table “PROPOSED PERMITTED COATINGS” to include Worst Case Coating and Worst Case Solvent for the columns identifying the Max Content lb/gal.

DEQ Response: Added.

APPENDIX C – PROCESSING FEE

In accordance with IDAPA 58.01.01.225, Frazier is subject to $1,000 PTC processing fee.

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.5	0	0.4
Total:	0.0	0	**0.4**
Fee Due	**$ 1,000.00**		