

Statement of Basis

**Permit to Construct No. P-2011.0070
Project ID 62577**

**Inventive LLC dba In The Ditch Towing Products
Mountain Home, Idaho**

Facility ID 039-00036

Final

**July 29, 2021
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Permit Writer**



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
Btu	British thermal units
CFR	Code of Federal Regulations
CO	carbon monoxide
day/yr	Days per calendar year
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
GACT	Generally Available Control Technology
GMAW	Gas Metal Arc Welding
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/day	hours per day
hr/yr	hours per calendar year
HVLP	High volume, low pressure
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu/hr	million British thermal units per hour
NASSCO	National Steel and Shipbuilding Company
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O ₂	oxygen
PAH	polyaromatic hydrocarbons
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SDS	Safety Data Sheets
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Inventive LLC dba In The Ditch Towing Products operates an existing facility that manufactures transportation equipment and towing products at the 3195 Industrial Way, Mountain Home, Idaho location. The facility is located north of Interstate 84 and west of Sun Valley Highway. The facility includes natural gas combustion sources for heaters and ovens, a washing process, powder coating booths, metal cutting with lasers and dry saws, and welding.

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).

March 4, 2011	P-2011.0070 the initial permit to construct for an automobile body repair and refinishing facility, Permit status S
September 27, 2018	P-2010.0070 modification of PTC to increase coating usage and install additional equipment, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is for a modification at an existing minor facility.

The applicant has proposed to:

- Construct a new building on a co-located, U-shaped parcel and use the existing facility address as a storage building once complete.
- Remove all equipment from the existing building
- Install and operate nine natural gas combustion heaters at the new building
- Install and operate three powder coating booths at the new building
- Increase the number of welders from thirteen to seventeen
- Install and operate three laser cutters
- Remove plasma cutting from the permitted equipment
- Revise and increase the usage of powder coating materials
- Increase the throughput of welding wire
- Change the address of the facility to the new building

Application Chronology

February 8, 2021	DEQ received an application and an application fee.
February 17 – March 4, 2021	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
March 11, 2021	DEQ determined that the application was complete.
May 12, 2021	DEQ made available the draft permit and statement of basis for peer and regional office review.
May 25, 2021	DEQ made available the draft permit and statement of basis for applicant review.
July 20, 2021	DEQ received the permit processing fee.

TECHNICAL ANALYSIS***Emissions Units and Control Equipment*****Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION**

Source ID No.	Sources	Control Equipment	Emission Point ID No.
1, 2	<u>H1 and H2 – Make-up Air Units:</u> Manufacturer: Cambridge Engineering Model: M130 Manufacture Date: 2021 Heat input rating: 2.476 MMBtu/hr Fuel: Natural Gas	None	H1 and H2 Exhaust (Roof)
3	<u>H3 – Burn-off Oven:</u> Manufacturer: Pollution Control Products, Co. Model: PRC-150 Manufacture Date: 2021 Heat input rating: 0.48 MMBtu/hr Fuel: Natural Gas	None	H3 Exhaust (Roof)
4	<u>H4 – Manual Powder Spray Booth Burner:</u> Manufacturer: Steelman Industries Model: 8810 GSP-OB Manufacture Date: Unknown Heat input rating: 0.50 MMBtu/hr Fuel: Natural Gas	None	H4 Exhaust (Roof)
5	<u>H5 – Automated Powder Coating Line – Washer Heater:</u> Manufacturer: Industrial Process Equipment Model: N/A Manufacture Date: 2021 Heat input rating: 1.224 MMBtu/hr Fuel: Natural Gas	None	H5 Exhaust (Roof)
6	<u>H6 – Automated Powder Coating Line – Dry-off Oven:</u> Manufacturer: Industrial Process Equipment Model: N/A Manufacture Date: 2021 Heat input rating: 2.040 MMBtu/hr Fuel: Natural Gas	None	H6 Exhaust (Roof)
7	<u>H7 – Automated Powder Coating Line – Cure Oven #1:</u> Manufacturer: Industrial Process Equipment Model: N/A Manufacture Date: 2021 Heat input rating: 2.040 MMBtu/hr Fuel: Natural Gas	None	H7 Exhaust (Roof)

8	<u>H8 – Automated Powder Coating Line – Cure Oven #2:</u> Manufacturer: Industrial Process Equipment Model: N/A Manufacture Date: 2021 Heat input rating: 2.040 MMBtu/hr Fuel: Natural Gas	None	H8 Exhaust (Roof)
9	<u>H9 – Automated Powder Coating Line – Pre-Gel IR Unit:</u> Manufacturer: Industrial Process Equipment Model: N/A Manufacture Date: 2021 Heat input rating: 0.816 MMBtu/hr Fuel: Natural Gas	None	H9 Exhaust (Roof)
10	<u>Paint Spray Booth:</u> Manufacturer: Steelman Industries, Inc. Model: 8810 GSP-OB Manufacture Date: 2018 Booth Type: Side Draft Spray Gun: GEMA OptiFlex 2F - HVLP	<u>Steelman Booth Control:</u> Manufacturer: APEL Model: C106B2 Type: Dry Filters PM ₁₀ control efficiency: 90% Spray Gun transfer efficiency: 65%	Paint Booth Exhaust (Roof)
11	<u>Paint Spray Booth:</u> Manufacturer: Global Finishing Solutions Model: PRBW-101013 Manufacture Date: 2021 Booth Type: Cross Draft Spray Gun: GEMA OptiFlex 2F – HVLP	<u>Global Booth Control:</u> Manufacturer: Midwesco/TDC Model: QX Filter Media Type: Dry Filters PM ₁₀ control efficiency: 88% Spray Gun transfer efficiency: 65%	Paint Booth Exhaust (Roof)
12	<u>Paint Spray Booth:</u> Manufacturer: Industrial Process Equipment Model: Automatic Line Manufacture Date: 2021 Booth Type: Side Draft Spray Gun: Nordson Encore LT - HVLP	<u>Industrial Booth Control:</u> Manufacturer: Nordson Model: PowderGrid Cartridge Type: Dry Filters PM ₁₀ control efficiency: 99.9% Spray Gun transfer efficiency: 65%	Paint Booth Exhaust (Roof)
13	<u>(17) Welders – W1-W17:</u> Manufacturer: Lincoln Electric, Millermatic, and Miller Invision Model: 350P, 251, 252, and 352 Manufacture Date: Unknown Type: Gas Metal Arc Welding (GMAW) and MigTig	None	Welding Room Building Vents
14	<u>(3) Laser Cutters – L1-L3:</u> Manufacturer: Mazak Model: Optiplex 3015 III 8000W and FT 150 Manufacture Date: 2021 Fuel: Electric	<u>Dust Collector:</u> Manufacturer: Robovent Model: Plaser 3 Filter Type: Endurex B16 ePTFE PM ₁₀ control efficiency: 99.9%	Dust Collector Vent
15	<u>(3) Metal Saws – M1-M3:</u> Manufacturer: Marvel and Ellis Model: 380A PC3360, PA 10/3EPC, 1600 Manufacture Date: Unknown Fuel: Electric	None	Mill Room Building Vents

Emissions Inventories

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 combustion sources, coating operations, and fabrication operations at the facility (see Appendix A) associated with this proposed project.

Combustion sources emission estimates of criteria pollutant, HAP PTE were based on emission factors from AP-42, operation of 8,760 hours per year, and process information specific to the facility for this proposed project. Coating operations emission estimates of criteria pollutant, HAP PTE were based on maximum spray rates, conservative transfer efficiency verified from AP-42, operation of 8,760 hours per year, and Safety Data Sheets (SDS) information specific to the materials used at the facility for this proposed project. Welding operations emission estimates of criteria pollutant, HAP PTE were based on AP-42 emission factors, San Diego Air Pollution Control District Welding Operations Guidance, fume correction factors supplied by the National Steel and Shipbuilding Company (NASSCO), and SDS information specific to the materials used at the facility for this proposed project. Laser cutting operations emission estimates of criteria pollutant, HAP PTE were based on emission factors from a study performed by the U.S. Department of Energy and SDS information specific to the materials used at 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.

The following table presents the uncontrolled Potential to Emit for regulated air pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. Uncontrolled annual emissions were calculated by scaling up the coating operation from normal business annual operations of 2,080 hrs/yr (8 hrs/day x 260 days/yr, normal business hours) to uncontrolled annual operation of 8,760 hrs/yr (24 hrs/day x 365 days/yr).

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
	T/yr	T/yr	T/yr	T/yr	T/yr
Heaters	0.46	0.04	6.05	5.08	0.33
Welding	1.45	0.00	0.00	0.00	0.00
Laser Cutting	0.06	0.00	0.00	0.00	0.00
Coatings	14.74	0.00	0.00	0.00	0.00
Metal Cutting	0.01	0.00	0.00	0.00	0.00
Total, Uncontrolled PTE	16.72	0.04	6.05	5.08	0.33

The following table presents the uncontrolled Potential to Emit for HAP pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. Uncontrolled annual emissions were calculated by scaling up the coating operation from normal business annual operations of 2,080 hrs/yr (8 hrs/day x 260 days/yr, normal business hours) to uncontrolled annual operation of 8,760 hrs/yr (24 hrs/day x 365 days/yr). Then, the worst-case maximum HAP Potential to Emit was determined for this manufacturing operation.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
Arsenic	4.0E-06
Benzene	4.2E-05
Beryllium	3.5E-07
Cadmium	2.2E-05
Chromium	8.0E-05
Cobalt	2.1E-04
Dichlorobenzene	2.4E-05
Formaldehyde	1.5E-03
Hexane	3.6E-02
Lead	1.0E-05
Manganese	1.6E-02
Mercury	5.2E-06
Toluene	6.8E-05
Nickel	1.1E-04
Polycyclic Organic Matter (PAH MAX.)	1.4E-05
Selenium	4.8E-07
Total	0.05

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 from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 4 PRE-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Heaters	0.01	0.06	0.00	0.01	0.19	0.84	0.16	0.70	0.01	0.05
Welding	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laser Cutting	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plasma Cutting	0.08	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coatings	0.07	0.30	0.00	0.00	0.00	0.00	0.00	0.00	2.89	10.80
Metal Saws	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pre-Project Totals	0.19	0.89	0.00	0.01	0.19	0.84	0.16	0.70	2.90	10.85

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
- b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

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 determined by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 5 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Heaters	0.03	0.15	0.00	0.01	0.46	2.00	0.38	1.68	0.03	0.11
Welding	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laser Cutting	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coatings	0.11	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal Saws	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Totals	0.29	0.88	0.00	0.01	0.46	2.00	0.38	1.68	0.03	0.11

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
- b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

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 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.

Table 6 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	0.19	0.89	0.00	0.01	0.19	0.84	0.16	0.70	2.90	10.85
Post Project Potential to Emit	0.29	0.88	0.00	0.01	0.46	2.00	0.38	1.68	0.03	0.11
Changes in Potential to Emit	0.10	-0.01	0.00	0.00	0.27	1.16	0.22	0.98	-2.87	-10.74

Non-Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of non-carcinogenic toxic air pollutants (TAP) is provided in the following table. Pre- and post-project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

Table 7 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS

Non-Carcinogenic 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)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Aluminum orthophosphate	2.63E-01			3.33E-01	No
Barium	8.41E-06	2.00E-05	1.16E-05	3.30E-02	No
Barium sulfate	1.50E-02			3.30E-02	No
Butyl Acetate	1.05E+00			4.73E+01	No
Carbon Black	1.00E-03	5.63E-03	4.63E-03	2.30E-01	No
Silica - amorphous	4.21E-04			6.67E-01	No
Chromium	8.23E-05	2.06E-05	-6.17E-05	3.30E-02	No
Cobalt	1.60E-07	1.37E-05	1.35E-05	3.30E-03	No

Copper	1.08E-03	1.88E-04	-8.92E-04	6.70E-02	No
Dichlorobenzene	2.29E-06	5.47E-06	3.17E-06	2.00E+01	No
Ethanol	2.63E-01			1.25E+02	No
HMDI	1.55E-03			2.00E-03	No
Iron Oxide Fume	1.32E-01	6.87E-02	-6.32E-02	3.33E-01	No
Manganese	1.99E-03	6.66E-06	-1.98E-03	6.70E-02	No
Mercury	4.97E-07	1.18E-06	6.88E-07	3.00E-03	No
Methyl n-Amyl Ketone	1.04E+00			1.57E+01	No
Molybdenum	9.98E-04	1.23E-05	-9.86E-04	3.33E-01	No
Naphthalene	1.17E-06	2.78E-06	1.61E-06	3.33E+00	No
Phosphorous	9.95E-04	6.46E-06	-9.88E-04	7.00E-03	No
Selenium	4.58E-08	1.09E-07	6.35E-08	1.30E-02	No
Silicon	1.52E-03	1.21E-03	-3.08E-04	6.67E-01	No
Vanadium	8.05E-06	1.77E-05	9.69E-06	3.00E-03	No
Zinc	5.54E-05	1.32E-04	7.67E-05	6.67E-01	No

All changes in emissions rates for non-carcinogenic TAP were below EL (screening emissions level) as a result of this project. Therefore, modeling is not required for any non-carcinogenic TAP because none of the 24-hour average non-carcinogenic screening ELs identified in IDAPA 58.01.01.585 were exceeded.

Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of carcinogenic toxic air pollutants (TAP) is provided in the following table.

Table 8 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR CARCINOGENIC TOXIC AIR POLLUTANTS

Carcinogenic Toxic Air Pollutants	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Arsenic	3.8E-07	9.1E-07	5.3E-07	1.5E-06	No
Benzene	4.0E-06	9.6E-06	5.6E-06	8.0E-04	No
Beryllium	3.2E-08	8.0E-08	4.8E-08	2.8E-05	No
Cadmium	2.1E-06	5.0E-06	2.9E-06	3.7E-06	No
Chromium+6	1.4E-06	4.2E-08	-1.3E-06	5.6E-07	No
Formaldehyde	1.4E-04	3.4E-04	2.0E-04	5.1E-04	No
3-Methylchloranthene	3.4E-09	8.2E-09	4.8E-09	2.5E-06	No
Nickel	5.1E-05	2.5E-05	-2.61E-05	2.7E-05	No
Polyaromatic Hydrocarbon	1.3E-06	3.1E-06	1.8E-06	9.1E-05	No
Polycyclic Organics ^a : 7-PAH	2.2E-08	5.2E-08	3.0E-08	2.0E-06	No

a) Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

All changes in emissions rates for carcinogenic TAP were below EL (screening emissions level) as a result of this project. Therefore, modeling is not required for any carcinogenic TAP because none of the annual average carcinogenic screening ELs identified in IDAPA 58.01.01.586 were exceeded.

Post Project HAP Emissions

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 9 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (lb/hr)	PTE (T/yr)
Arsenic	9.11E-07	4.0E-06
Benzene	9.57E-06	4.2E-05
Beryllium	8.00E-08	3.5E-07
Cadmium	5.01E-06	2.2E-05
Chromium	1.83E-05	8.0E-05
Cobalt	4.81E-05	2.1E-04
Dichlorobenzene	5.47E-06	2.4E-05
Formaldehyde	3.42E-04	1.5E-03
Hexane	8.20E-03	3.6E-02
Lead	2.28E-06	1.0E-05
Manganese	3.62E-03	1.6E-02
Mercury	1.18E-06	5.2E-06
Naphthalene	1.55E-05	6.8E-05
Nickel	2.53E-05	1.1E-04
Polycyclic Organic Matter (PAH MAX.)	3.11E-06	1.4E-05
Selenium	1.09E-07	4.8E-07
Totals	0.01	0.05

Ambient Air Quality Impact Analyses

The applicant has demonstrated pre-construction compliance to DEQ’s satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ’s satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of the Ambient Air Impact Analysis for TAP is provided in Appendix A.

An ambient air quality impact analyses was not required for this permitting action because criteria pollutants are below regulatory concern and the TAP emissions are below their respective EL’s

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Elmore County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

- A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.
- SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.
- SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10

and 25 T/yr HAP major source thresholds.

UNK = Class is unknown.

For All Other Pollutants:

A = Use when permitted emissions of a pollutant are > 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.

UNK = Class is unknown.

Table 10 REGULATED AIR POLLUTANT FACILITY CLASSIFICATIONS

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	16.72	0.87	100	B
PM ₁₀	16.72	0.87	100	B
PM _{2.5}	16.72	0.87	100	B
SO ₂	0.04	0.01	100	B
NO _x	6.05	2.00	100	B
CO	5.08	1.68	100	B
VOC	0.33	0.11	100	B
HAP (single)	0.11	0.04	10	B
Total HAPs	0.19	0.05	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 revised PTC be issued to the facility for the proposed new emission sources located at the new building location on the contiguous property. 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 of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4, 3.4, and 4.4.

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

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM₁₀, SO₂, NO_x, CO, VOC, and HAP or 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories Section of this analysis. 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)

The facility is not subject to any NSPS requirements 40 CFR Part 60.

NESHAP Applicability (40 CFR 61)

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

MACT/GACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Because the facility uses spray coating of towing parts, it may be subject to the requirements of 40 CFR Part 63, Subpart M – Surface Coating of Miscellaneous Metal Parts and Products. The following breakdown provided by the applicant demonstrates that they are not subject to this Subpart.

40 CFR 63, Subpart M National Emission Standards for Hazardous Air Pollutants:
Surface Coating of Miscellaneous Metal Parts and Products

§ 63.3880 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous metal parts and products surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.3881 Am I subject to this subpart?

(a) Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, ~~bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products.~~ Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any miscellaneous metal parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (6) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. ~~Coating application with handheld, non-refillable~~

~~aerosol containers, touch up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.~~

~~(2) The general use coating subcategory includes all surface coating operations that are not high performance, magnet wire, rubber-to-metal, or extreme performance fluoropolymer coating operations.~~

~~(3) The high performance coating subcategory includes surface coating operations that are performed using coatings that meet the definition of high performance architectural coating or high temperature coating in §63.3981.~~

~~(4) The magnet wire coating subcategory includes surface coating operations that are performed using coatings that meet the definition of magnet wire coatings in §63.3981.~~

~~(5) The rubber to metal coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of rubber to metal coatings in §63.3981.~~

~~(6) The extreme performance fluoropolymer coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of extreme performance fluoropolymer coatings in §63.3981.~~

~~(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3882, that uses 946 liters (250 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You do not need to include coatings that meet the definition of non-HAP coating contained in §63.3981 in determining whether you use 946 liters (250 gal) per year, or more, of coatings in the surface coating of miscellaneous metal parts and products.~~

In the Ditch manufactures towing parts and accessories. However, this rule affects a miscellaneous metal parts and products surface coating facility that uses 250 gallons per year or more of coatings that contain hazardous air pollutants and is a major source, or is located at a major source, or is part of a major source of HAP emissions. In the Ditch does not use any powder coating product containing hazardous air pollutants. This subpart does not apply to In the Ditch.

Because the facility uses spray coating of towing parts, it may be subject to the requirements of 40 CFR Part 63, Subpart HHHHHH – Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. The following breakdown provided by the applicant demonstrates that they are not subject to this Subpart.

40 CFR 63, Subpart HHHHHH..... National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

§ 63.11169 What is the purpose of this subpart?

Except as provided in paragraph (d) of this section, this subpart establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in any of the activities in paragraphs (a) through (c) of this section. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards contained herein.

~~(a) Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), Chemical Abstract Service number 75092, in paint removal processes;~~

~~(b) Autobody refinishing operations that encompass motor vehicle and mobile equipment spray applied surface coating operations;~~

~~(c) Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.~~

~~(d) This subpart does not apply to any of the activities described in paragraph (d)(1) through (6) of this section.~~

~~(1) Surface coating or paint stripping performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.~~

~~(2) Surface coating or paint stripping of military munitions, as defined in §63.11180, manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or equipment directly and exclusively used for the purposes of transporting military munitions.~~

~~(3) Surface coating or paint stripping performed by individuals on their personal vehicles, possessions, or property, either as a hobby or for maintenance of their personal vehicles, possessions, or property. This subpart also does not apply when these operations are performed by individuals for others without compensation. An individual who spray applies surface coating to more than two motor vehicles or pieces of mobile equipment per year is subject to the requirements in this subpart that pertain to motor vehicle and mobile equipment surface coating regardless of whether compensation is received.~~

~~(4) Surface coating or paint stripping that meets the definition of “research and laboratory activities” in §63.11180.~~

~~(5) Surface coating or paint stripping that meets the definition of “quality control activities” in §63.11180.~~

~~(6) Surface coating or paint stripping activities that are covered under another area source NESHAP.~~

In the Ditch spray-applies surface coatings on towing products that are not motor vehicles or mobile equipment and does not have auto body refinishing operations on site. In the Ditch spray applies coatings to metal parts but does not use any coatings that contain the target HAPs. Consequently, the rule does not apply. In the Ditch is not covered under another area source NESHAP.

§ 63.11170 Am I subject to this subpart?

~~(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:~~

~~(1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.~~

~~(2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.~~

~~(3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.~~

~~(b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.~~

In the Ditch does not perform spray application of coatings, as defined in §63.11180, to motor vehicles or mobile equipment. In the Ditch does not perform paint stripping using methylene chloride. In the Ditch spray applies coatings to metal parts but does not use any coatings that contain the target HAPs. In the Ditch is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. The requirements in Subpart HHHHHH do not apply to In the Ditch.

Because the facility uses spray coating of towing parts, it may be subject to the requirements of 40 CFR Part 63, Subpart XXXXXX – Area Source Standards for Nine Metal Fabrication and Finishing Source Categories. The following breakdown provided by the applicant demonstrates that they are not subject to this Subpart.

40 CFR 63, Subpart XXXXXX..... National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

§ 63.11514..... Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an area source that is primarily engaged in the operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of this section. Descriptions of these source categories are shown in Table 1 of this subpart. “Primarily engaged” is defined in §63.11522, “What definitions apply to this subpart?”

(1) Electrical and Electronic Equipment Finishing Operations;

(2) Fabricated Metal Products;

(3) Fabricated Plate Work (Boiler Shops);

(4) Fabricated Structural Metal Manufacturing;

(5) Heating Equipment, except Electric;

(6) Industrial Machinery and Equipment Finishing Operations;

(7) Iron and Steel Forging;

(8) Primary Metal Products Manufacturing; and

(9) Valves and Pipe Fittings.

EPA guidance indicates that a facility covered by Subpart XXXXXX would have the combinations of SIC (Standard Industrial Classification) and NAICS (North American Industrial Classification System) listed in Chart 1 SIC/NAICS Code Applicability Charts for Nine Metal Fabrication and Finishing Source Categories (40 CFR 63 subpart XXXXXX), The potentially similar subcategory and the applicable SIC/NAICS code combination are described below:

The subcategory Fabricated Metal Products (SIC 3499/NAICS 332117; SIC 3499/NAICS 332999) is defined as:

“Establishments primarily engaged in manufacturing fabricated metal products, such as fire or burglary resistive steel safes and vaults and similar fire or burglary resistive products; and collapsible tubes of thin flexible metal. Also, establishments primarily engaged in manufacturing powder metallurgy products, metal boxes; metal ladders; metal household articles, such as ice cream freezers and ironing boards; and other fabricated metal products not elsewhere classified.” (Table 1 to Subpart XXXXXX of Part 63—Description of Source Categories Affected by This Subpart)

Since In the Ditch does not manufacture these types of products and the SIC/NAICS code combination does not apply, In the Ditch is not engaged in manufacturing fabricated metal products subject to Subpart XXXXXX.

The subcategory Fabricated Structural Metal Manufacturing (SIC 34419/NAICS 332312) is defined as:

“Establishments primarily engaged in fabricating iron and steel or other metal for structural purposes, such as bridges, buildings, and sections for ships, boats, and barges.” (Table 1 to Subpart XXXXXX of Part 63—Description of Source Categories Affected by This Subpart)

Since In the Ditch does not manufacture these types of products and the SIC/NAICS code combination does not apply, In the Ditch is not engaged in fabricated structural metal manufacturing subject to Subpart XXXXXX.

The subcategory Industrial Machinery and Equipment Finishing Operations (SIC 3531/NAICS 333120; SIC 3533/NAICS 333132; SIC 3561/NAICS 333911) is defined as:

Establishments primarily engaged in construction machinery manufacturing; oil and gas field machinery manufacturing; and pumps and pumping equipment manufacturing. The construction machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing heavy machinery and equipment of types used primarily by the construction industries, such as bulldozers; concrete mixers; cranes, except industrial plant overhead and truck type cranes; dredging machinery; pavers; and power shovels. Also establishments primarily engaged in manufacturing forestry equipment and certain specialized equipment, not elsewhere classified, similar to that used by the construction industries, such as elevating platforms, ship cranes, and capstans, aerial work platforms, and automobile wrecker hoists. The oil and gas field machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing machinery and equipment for use in oil and gas fields or for drilling water wells, including portable drilling rigs. The pumps and pumping equipment manufacturing sector of this source category includes establishments primarily engaged in manufacturing pumps and pumping equipment for general industrial, commercial, or household use, except fluid power pumps and motors. This category includes establishments primarily engaged in manufacturing domestic water and sump pumps.

Since In the Ditch does not manufacture these types of products and the SIC/NAICS code combination does not apply, In the Ditch is not engaged in industrial machinery and equipment finishing operations subject to Subpart XXXXXX.

The subcategory Primary Metal Products Manufacturing (SIC 3399/NAICS 332618) is defined as:

Establishments primarily engaged in manufacturing products such as fabricated wire products (except springs) made from purchased wire. These facilities also manufacture steel balls; nonferrous metal brads and nails; nonferrous metal spikes, staples, and tacks; and other primary metals products not elsewhere classified.

Since In the Ditch does not manufacture these types of products and the SIC/NAICS code combination does not apply, In the Ditch is not engaged in primary metal products manufacturing subject to Subpart XXXXXX.

The subcategory Iron and Steel Forging is defined as:

Establishments primarily engaged in the forging manufacturing process, where purchased iron and steel metal is pressed, pounded or squeezed under great pressure into high strength parts known as forgings. The forging process is different from the casting and foundry processes, as metal used to make forged parts is never melted and poured.

In the Ditch is not engaged in iron and steel forging operations subject to Subpart XXXXXX.

Permit Conditions Review

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

2 - Combustion Sources

Revised Permit Conditions 2.1 through 2.3

These conditions were revised from 12 natural gas heaters located at the old facility building to 9 new natural gas heaters located at the new facility building. Emissions were calculated using AP-42 emission factors and an annual limit on fuel to the facility.

Revised Permit Condition 2.4

This permit condition was revised in language to only refer to the opacity from combustion sources in Section 2 only.

Permit Condition 2.5

No change to this permit condition. The only requirement for fuel burning equipment applicable to this section is IDAPA 58.01.01.677. This limits the allowable PM to 0.015 gr/dscf.

Revised Permit Condition 2.6

This permit condition restricted the fuel to natural gas exclusively in the previous permit. An annual natural gas throughput limit was included in this permit condition based on the emissions inventory calculation methodology.

New Permit Condition 2.7

Monitoring and Recordkeeping Requirements were included in this new permit condition. The facility is required to monitor and record the natural gas usage on a monthly basis in order to demonstrate compliance with permit condition 2.6

3 – Coating Operations

Revised Permit Conditions 3.1 through 3.3

These conditions were revised from two paint booths to three paint booths and a washing process. The paint booths include two manual powder coating booths and an automated powder coating line. The washing process prepares the parts with chemical cleaners prior to powder coating. Emissions were calculated using SDS information, usage limits requested by the facility, and a conservative spray retention rate of 85%. VOC emissions were removed from this section due to the coating materials not containing VOC's.

Revised Permit Condition 3.4

This permit condition was changed from a daily usage operational requirement to the 20% opacity limit on the coating operations.

Revised Permit Condition 3.5

The previous permit conditions for 3.4 and 3.5 included daily and annual coating usage limits, respectively. The two separate conditions were combined into this revised permit condition. There were four coating materials on the previous permit, these have been removed and replaced with two new materials. The new material usage rate is 75 pounds per day and 11.7 tons per year, each.

Revised Permit Condition 3.6

This previous condition limited usage of coating material to be within the booth with controls operating and the doors closed. This was changed to include any of the three booths.

The second part of this condition limited painting to HVLP, Electrostatic, airless, or air assisted spray guns with a minimum 65% transfer efficiency. The language of this condition was revised to include the two types of spray guns to be used in the paint booths. The efficiency requirement remains the same.

The third part of this condition required the facility to install, maintain, and operate the filter systems according to the manufacturer's specification and recommendations. The only change to this part of the condition was to reduce the efficiency of the filter to 88% based on emission calculations.

Revised Permit Condition 3.7

This condition was for alternative daily coating usage scenarios in the previous permit. This condition was moved to condition 3.8 and the new 3.7 condition includes the washing chemicals used at the facility. There are three chemicals used to prepare the parts for coating and although there are no emissions associated with these chemicals, the daily, monthly, and yearly usage rates were included in the permit.

Revised Permit Conditions 3.8 through 3.11

These permit conditions follow the alternative daily coating usage scenarios in permit conditions 3.7 through 3.10 on the previous permit. In order to allow flexibility for the facility in the event that a new or reformulated material is to be used at the facility, a procedure has been included in the permit. This procedure requires the facility to perform a TAP compliance and emission limit compliance to demonstrate that the material is below the values that have been approved. The language was cleaned up and condensed in these conditions.

Condition 3.8 requires the facility to propose a maximum daily limit for a new material and estimate the emissions for comparison against permitted levels. No new materials may be used if they do not demonstrate compliance with the limits on a facility wide level.

Condition 3.9 gives a procedure for estimating TAP emissions based on usage and TAP concentration from the SDS. This condition requires the highest value if a range is listed on the SDS for calculation purposes and assumes 1% of the density if the TAP concentration is below the detection level. Calculated TAP emissions are compared against the values in Table 3.5 of the permit.

Condition 3.10 includes the TAP Screening Emission Rates and Modeled Concentration Limits in Table 3.5 that all new scenarios are compared against. If the TAP emissions are above the screening rates, a modeling analysis is required.

Condition 3.11 requires the facility to compare the emissions of criteria pollutants and HAP emissions to the limits in Table 3.2 and describes how to calculate the emissions based on usage rates, SDS concentrations, and efficiencies of spray guns and filtration systems.

Revised Permit Condition 3.12

This condition is for monitoring the usage of coating and washing materials used for each day at the facility to show compliance with the rates in Table 3.3 and Table 3.4 of the permit. This condition also requires the facility to maintain documentation such as material SDS for all materials used, manufacturer's specification sheets on spray guns and control devices, any engineering assumptions used in emission calculations, and purchase records for the materials. This condition combines conditions 3.11 through 3.13 in the previous permit.

Permit Condition 3.13

This condition requires reporting on May 1st for all coating usage scenarios used for the previous year. The report must include documentation to support the TAP compliance demonstrations, emission limit compliance demonstrations, and any modeling analyses conducted. This condition was previously condition 3.14, but the language remains the same.

4 – Fabrication

Revised Permit Conditions 4.1 through 4.3

The old welding equipment, plasma cutting, and laser cutting equipment were removed from the permit and the new laser cutting and welding equipment were added. Process information, controls, and emissions have all been revised in these conditions. Dry cutting using metal saws remain included in this section as insignificant sources. Welding emissions were calculated with usage rates, SDS information, AP-42 emission factors, and San Diego Air Pollution Control District Welding Operations Guidance, fume correction factors supplied by the National Steel and Shipbuilding Company (NASSCO). Laser cutting operations emissions were based on emission factors from a study performed by the U.S. Department of Energy and SDS information specific to the materials used at the facility for this proposed project.

Revised Permit Condition 4.4

This permit condition was changed from operational requirements (moved to Condition 4.5) to the 20% opacity limit on the fabrication operations.

Revised Permit Condition 4.5

This permit condition was condition 4.4 in the previous permit. The language of the condition was changed to limit welding wire usage on a yearly basis for the facility at rates specified by the facility.

Revised Permit Condition 4.6

The previous permit included plasma cutting operational hours for condition 4.5 and laser cutting hours of operation for condition 4.6. The plasma cutting has been removed from the facility and this condition was changed to an annual hour limit for laser cutting.

Revised Permit Condition 4.7

The language of this permit condition was revised for monitoring and recording the welding wire usage at the facility for each month. The previous 12-months are summed together to determine compliance with the annual welding wire limit in condition 4.5.

Revised Permit Condition 4.8

The language of this condition was changed from monitoring and recording the hours of operation of laser and plasma cutting in the previous permit to only laser cutting hours since plasma cutting is no longer used at the facility. This condition requires the facility to record the operational hours for each laser cutter on a monthly basis. The previous 12-months are summed together to determine compliance with the annual operating limit in condition 4.6.

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

Table 3-1(a)

Natural Gas Combustion - Criteria Pollutants
 In the Ditch Towing Products, Mountain Home, ID

Sources	Unit Code	No. of units	Input Rate (MMscf/hr)	Duty %	Estimated Criteria Restricted Emissions (lb/yr)							
					Estimated Annual Usage (MMscf/yr)	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC	Lead
Cambridge Engineering, Make-up Air Units, M130	H1,H2	2	4.9E-03	0.40	1.7E+01	1.29E+02	1.29E+02	1.02E+01	1.70E+03	1.43E+03	9.35E+01	8.50E-03
Burn-off Oven	H3	1	4.7E-04	0.25	1.0E+00	7.83E+00	7.83E+00	6.18E-01	1.03E+02	8.66E+01	5.67E+00	5.15E-04
Steelman Industries Inc 8810 GSP-OB Spray Booth Oven	H4	1	4.9E-04	0.40	1.7E+00	1.31E+01	1.31E+01	1.03E+00	1.72E+02	1.44E+02	9.45E+00	8.59E-04
Automated Powder Coating Line - Washer	H5	1	1.2E-03	0.25	2.6E+00	2.00E+01	2.00E+01	1.58E+00	2.63E+02	2.21E+02	1.45E+01	1.31E-03
Automated Powder Coating Line - Dry-off Oven	H6	1	2.0E-03	0.40	7.0E+00	5.33E+01	5.33E+01	4.20E+00	7.01E+02	5.89E+02	3.85E+01	3.50E-03
Automated Powder Coating Line - Cure Oven#1	H7	1	2.0E-03	0.25	4.4E+00	3.33E+01	3.33E+01	2.63E+00	4.38E+02	3.68E+02	2.41E+01	2.19E-03
Automated Powder Coating Line - Cure Oven#2	H8	1	2.0E-03	0.25	4.4E+00	3.33E+01	3.33E+01	2.63E+00	4.38E+02	3.68E+02	2.41E+01	2.19E-03
Automated Powder Coating Line - Pre-gel IR Unit	H9	1	8.0E-04	0.25	1.8E+00	1.33E+01	1.33E+01	1.05E+00	1.75E+02	1.47E+02	9.64E+00	8.76E-04
Combined Emission (lb/hr)					39.9	0.035	0.035	0.003	0.455	0.383	0.025	2.28E-06
Combined Emission (ton/yr)						0.15	0.15	0.01	2.00	1.68	0.11	9.98E-06

Notes:

Natural gas heat value = 1020 MMBtu/MMscf

Emission factors taken from AP-42, Section 1.4 Natural Gas Combustion (7/98)

Emission Factor (lb/MMscf)	PM10	PM2.5	SO2	NOx	CO	VOC	Lead
	7.6	7.6	0.6	100	84	5.5	0.0005

Greenhouse Gas Emission: Greenhouse gas emission factors taken from Table A-1, EPA Greenhouse Gas Inventory Guidance Direct Emissions from Stationary Combustion Sources.

Greenhouse Gas Emissions	
CO ₂ =	0.054 kg/scf Natural Gas
CO ₂ =	2.4E+03 Tons/year
CH ₄ =	0.00103 g/scf Natural Gas
CH ₄ =	4.5E-02 Tons/year
N ₂ O =	0.0001 g/scf Natural Gas
N ₂ O =	4.5E-02 Tons/year
Total CO ₂ e = CO ₂ + (CH ₄ * 25) * (N ₂ O * 298)	
CO ₂ e =	2384.7 Tons/year

Table 3-1(b)
 Natural Gas Combustion - HAP and TAP
 In the Ditch Towing Products, Mountain Home, ID

Hazardous & Toxic Air Pollutants (HAP & TAP)	Emission Factor ¹	Restricted Emissions	
		lb/MMscf	lb/hr
PAH HAPs			
2-Methylnaphthalene	2.40E-05	1.09E-07	4.8E-07
3-Methylchloranthrene	1.80E-06	8.20E-09	3.6E-08
Acenaphthene	1.80E-06	8.20E-09	3.6E-08
Acenaphthylene	1.80E-06	8.20E-09	3.6E-08
Anthracene	2.40E-06	1.09E-08	4.8E-08
Benzo(a)anthracene	1.80E-06	8.20E-09	3.6E-08
Benzo(a)pyrene	1.20E-06	5.47E-09	2.4E-08
Benzo(b)fluoranthene	1.80E-06	8.20E-09	3.6E-08
Benzo(g,h,i)perylene	1.20E-06	5.47E-09	2.4E-08
Benzo(k)fluoranthene	1.80E-06	8.20E-09	3.6E-08
Chrysene	1.80E-06	8.20E-09	3.6E-08
Dibenzo(a,h)anthracene	1.20E-06	5.47E-09	2.4E-08
Fluoranthene	3.00E-06	1.37E-08	6.0E-08
Fluorene	2.80E-06	1.28E-08	5.6E-08
Indeno(1,2,3-cd)pyrene	1.80E-06	8.20E-09	3.6E-08
Naphthalene	6.10E-04	2.78E-06	1.2E-05
Phenanathrene	1.70E-05	7.74E-08	3.4E-07
Pyrene	5.00E-06	2.28E-08	1.0E-07
PAH Max. total		3.11E-06	1.36E-05
Polycyclic Org. Matter (POM, 7-PAH Group)		5.19E-08	2.3E-07
Non-PAH HAPs			
Benzene	2.10E-03	9.57E-06	4.2E-05
Dichlorobenzene	1.20E-03	5.47E-06	2.4E-05
Formaldehyde	7.50E-02	3.42E-04	1.5E-03
Hexane	1.80E+00	8.20E-03	3.6E-02
Toluene	3.40E-03	1.55E-05	6.8E-05
Non-HAP Organic Compounds			
Pentane	2.60E+00	1.18E-02	5.2E-02
Metal HAPs			
Arsenic	2.00E-04	9.11E-07	4.0E-06
Beryllium	1.20E-05	5.47E-08	2.4E-07
Cadmium	1.10E-03	5.01E-06	2.2E-05
Chromium	1.40E-03	6.38E-06	2.8E-05
Cobalt	8.40E-05	3.83E-07	1.7E-06
Manganese	3.80E-04	1.73E-06	7.6E-06
Mercury	2.60E-04	1.18E-06	5.2E-06
Nickel	2.10E-03	9.57E-06	4.2E-05
Selenium	2.40E-05	1.09E-07	4.8E-07
Non-HAP Metals			
Barium	4.40E-03	2.00E-05	8.8E-05
Copper	8.50E-04	3.87E-06	1.7E-05
Molybdenum	1.10E-03	5.01E-06	2.2E-05
Vanadium	2.30E-03	1.05E-05	4.6E-05
Zinc	2.90E-02	1.32E-04	5.8E-04
Total HAP		8.60E-03	3.77E-02
Total TAP		2.06E-02	9.03E-02

Notes:

1. Emission factors taken from AP-42, Section 1.4 *Natural Gas Combustion* (7/98)

Table 3-2
Welding Process - HAP and TAP
 In the Ditch Towing Products, Mountain Home, ID

Electrode	Restricted Daily Use (lbs.) ¹	Restricted Annual Use (lbs.)	Al	Cr	Cr+6	Cu	Fe	Mg	Mn	Molyb	Ni	Silicon	Be	P	Silica Fume Amorphous 69012-64-2	Zirconium 7440-67-7	Vanadium 1314-62-1
Hobart ER4043, 404304712P, 3/64", 12 lb. spool ^{2,3,4}	19.7	6,144	99.7%	0.01%		0.3%	0.8%	0.05%	0.05%		0.05%	6.0%	0.0003%		6%		
Hobart ER4043, 404304723L, 3/64", 100 lb. drum ^{3,4}	23.6	7,373	99.7%	0.01%		0.3%	0.8%	0.05%	0.05%		0.05%	6.0%	0.0003%		6%		
Hobart Premier Arc 6, ER70S-6, PA6035X45, 0.035 inch, 45 lbs. spool ^{3,5}	118.2	36,864	0.1%	0.10%		0.20%	90.0%		1.41%	0.01%	0.11%	0.82%		0.007%		0.1%	0.01%
Lincoln Electric SuperArc L56, ER70S-6, ED029915, 0.045 inch, 250 lb. drum ^{3,5}	200.9	62,669		0.05%		0.22%	97.06%		1.60%	0.01%	0.04%	0.87%		0.010%			0.01%
TAP			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HAP			585	585	586	585	585	585	585	585	586	585	586	585	585	585	585

Restricted Emissions	PM	Al	Cr	Cr+6	Cu	Fe	Mg	Mn	Molyb	Ni	Silicon	Be	P	Silica Fume Amorphous	Zirconium	Vanadium
Restricted Uncontrolled PM and TAP Fume (lbs/dav)	1.90E+00	2.4E-01	3.3E-04	1.18E-06	4.4E-03	1.6E+00	1.2E-04	1.0E-01	1.7E-04	4.4E-04	2.9E-02	7.1E-07	1.5E-04	1.4E-02	6.5E-04	1.7E-04
Restricted Uncontrolled PM and TAP Fume (lb/yr)	5.91E+02	7.38E+01	1.02E-01	3.69E-04	1.38E+00	5.14E+02	3.69E-02	3.17E+01	5.44E-02	1.36E-01	9.06E+00	2.22E-04	4.83E-02	4.43E+00	2.01E-01	5.44E-02
Restricted Uncontrolled PM and TAP Hourly (24-hour average 585 TAPs, annual-average 586 TAPs) Fume Emissions lbs/hr	7.90E-02	9.86E-03	1.36E-05	4.22E-08	1.84E-04	6.87E-02	4.93E-06	4.23E-03	7.26E-06	1.56E-05	1.21E-03	2.53E-08	6.46E-06	5.92E-04	2.69E-05	7.26E-06
Restricted Controlled PM and TAP Fume lbs/dav	1.90E+00	2.37E-01	3.42E-04	1.2E-06	4.42E-03	1.65E+00	1.18E-04	1.02E-01	1.74E-04	4.37E-04	2.90E-02	7.10E-07	1.55E-04	1.42E-02	6.46E-04	1.74E-04
Restricted Controlled PM and TAP Fume lbs/yr	5.91E+02	7.38E+01	1.07E-01	3.69E-04	1.38E+00	5.14E+02	3.69E-02	3.17E+01	5.44E-02	1.36E-01	9.06E+00	2.22E-04	4.83E-02	4.43E+00	2.01E-01	5.44E-02
Restricted Controlled PM and TAP Hourly (24-hour average 585 TAPs, annual-average 586 TAPs) Fume Emissions lbs/hr	7.90E-02	9.86E-03	1.42E-05	4.22E-08	1.84E-04	6.87E-02	4.93E-06	4.23E-03	7.26E-06	1.56E-05	1.21E-03	2.53E-08	6.46E-06	5.92E-04	2.69E-05	7.26E-06

Notes:
¹ Restricted daily consumption of electrode estimated based on usage data and future production increase at In the Ditch. Annual usage is estimated based on 6 days a week and 52 weeks a year.
² Chemical composition from Test Certificate when listed or from Safety Data Sheet; max. test certificate composition applied; max. chromium Hobart test value not listed, chromium value assumed 10X lot test result (0.001%);
³ Hobart ER4043 is not listed in AP-42; apply SDAPCD and NASSCO emission factors.
⁴ SDAPCD G99 Gas Metal Arc Welding (GMAW), Unspecified Electrode, General District-ARB-NASSCO GMAW Emission Estimation Procedure

	GMAW, MIG, TIG	SMAW, FCAW	unspecified
Default fume rates (lbs fume/lbs rod)	1.0%	2.0%	5.0%
Default fume Correction Factor	54.6%	28.7%	100.0%
Default Cr+6 conversion rates	5.0%	63.0%	10.0%
default emission factor (lbs./lbs rod)	Cl (lbs. TAP/lbs. rod)		
PM10 (PM2.5)	0.01		
Cr+3	0.01*0.5464*.95*Cl		
Cr+6	0.01*0.5464*.05*Cl		
Cobalt	0.01*0.5464*Cl		
Manganese	0.01*0.5464*Cl		
Nickel	0.01*0.5464*Cl		
Lead	0.01*0.5464*Cl		
Metals w/o EF	0.01*0.5464*Cl		

⁵ ER70S-6 emissions are calculated based on AP-42 emission factors.

U.S. EPA AP-42, Chapter 12.11, Table 12.19-1 and 12.19-2, E70S				
E70S, ER70S-2, ER70S-5, ER70S-6	5.2	lbs/1000 lbs electrode		fume generation
TAP	Cr	Cr+6	Cobalt	Mn Ni
0.1 lbs fume/1000 lbs electrode	0.000001	ND	0.000001	0.000318 0.000001

Table 3-3(a)
Laser Cutting Process - HAP and TAP
In the Ditch Towing Products, Mountain Home, ID

Material	Estimated Max Unrestricted Hours Operation ¹		Estimated Max Restricted Hours Operation ²		TAP Constituents ³	CAS Number	Constituent Concentration (max wt%) ³	Emission Factor (lbs./hr.) ⁴	Unrestricted Uncontrolled Emissions		Restricted Uncontrolled Emissions		Cyclone Efficiency (%)	Control Equipment Efficiency (%) ⁵	Unrestricted Controlled Emissions		Restricted Controlled Emissions	
	hrs./day	hrs./yr	hrs./day	hrs./yr					lb/hr	lb/yr	lb/hr	lb/yr			lb/hr	lb/yr	lb/hr	lb/yr
Stainless Steel	3.96	1445	2.64	824	Chromium Total	7440-47-3	18.6%	0.01	4.5E-04	4.0E+00	3.0E-04	2.3E+00	99.9%	99.9%	4.5E-07	4.0E-03	3.0E-07	2.3E-03
					Chromium +6 ⁶	7440-47-3			9.9E-08	8.7E-04	6.6E-08	5.0E-04			9.9E-11	8.7E-07	5.7E-11	5.0E-07
					Copper	7440-50-8	0.5%		1.3E-05	1.1E-01	8.4E-06	6.3E-02			1.3E-08	1.1E-04	8.4E-09	6.3E-05
					Iron	1309-37-1	70.1%		1.7E-03	1.5E+01	1.1E-03	8.5E+00			1.7E-06	1.5E-02	1.1E-06	8.5E-03
					Manganese	7439-96-5	1.8%		4.4E-05	3.9E-01	2.9E-05	2.2E-01			4.4E-08	3.9E-04	2.9E-08	2.2E-04
					Molybdenum	7439-98-7	0.4%		8.9E-06	7.8E-02	5.9E-06	4.4E-02			8.9E-09	7.8E-05	5.9E-09	4.4E-05
					Nickel	7440-02-0	8.1%		2.0E-04	1.7E+00	1.3E-04	9.7E-01			2.0E-07	1.7E-03	1.1E-07	9.7E-04
					Phosphorus	7723-14-0	0.0%		7.8E-07	6.8E-03	5.2E-07	3.9E-03			7.8E-10	6.8E-06	5.2E-10	3.9E-06
					Silicon		0.3%		6.7E-06	5.9E-02	4.5E-06	3.4E-02			6.7E-09	5.9E-05	4.5E-09	3.4E-05
					Carbon		0.0%		1.1E-06	9.8E-03	7.5E-07	5.6E-03			1.1E-09	9.8E-06	7.5E-10	5.6E-06
					Nitrogen		0.1%		1.9E-06	1.7E-02	1.3E-06	9.6E-03			1.9E-09	1.7E-05	1.3E-09	9.6E-06
					Sulfur		0.0%		3.6E-08	3.2E-04	2.4E-08	1.8E-04			3.6E-11	3.2E-07	2.4E-11	1.8E-07
Steel	7.92	2891	5.28	1647	Chromium Total	7440-47-3	0.05%	0.024	3.9E-06	3.4E-02	2.6E-06	2.0E-02	99.9%	99.9%	3.9E-09	3.4E-05	2.6E-09	2.0E-05
					Chromium +6 ⁶	7440-47-3			8.6E-10	7.6E-06	5.8E-10	4.3E-06			8.6E-13	7.6E-09	4.9E-13	4.3E-09
					Copper	7440-50-8	1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
					Iron	1309-37-1	99.0%		7.8E-03	6.8E+01	5.2E-03	3.9E+01			7.8E-06	6.8E-02	5.2E-06	3.9E-02
					Manganese	7439-96-5	2.0%		1.6E-04	1.4E+00	1.0E-04	7.8E-01			1.6E-07	1.4E-03	1.0E-07	7.8E-04
					Molybdenum	7439-98-7	1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
					Nickel	7440-02-0	0.02%		1.6E-06	1.4E-02	1.0E-06	7.8E-03			1.6E-09	1.4E-05	1.0E-09	7.8E-06
					Phosphorus	7723-14-0	1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
					Silicon		1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
					Carbon		1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
					Nitrogen				0.0E+00	0.0E+00	0.0E+00	0.0E+00			0.0E+00	0.0E+00	0.0E+00	0.0E+00
					Sulfur		1.0%		7.9E-05	6.9E-01	5.2E-05	3.9E-01			7.9E-08	6.9E-04	5.2E-08	3.9E-04
Aluminum	24.12	8804	16.08	5017	Chromium Total	7440-47-3	0.20%	0.003	5.8E-06	5.1E-02	3.9E-06	2.9E-02	99.9%	99.9%	5.8E-09	5.1E-05	3.9E-09	2.9E-05
					Chromium +6 ⁶	7440-47-3			1.3E-09	1.1E-05	8.6E-10	6.4E-06			1.3E-12	1.1E-08	7.3E-13	6.4E-09
					Copper	7440-50-8	4.9%		1.4E-04	1.3E+00	9.6E-05	7.2E-01			1.4E-07	1.3E-03	9.6E-08	7.2E-04
					Iron	1309-37-1	0.5%		1.5E-05	1.3E-01	9.7E-06	7.3E-02			1.5E-08	1.3E-04	9.7E-09	7.3E-05
					Manganese	7439-96-5	0.9%		2.6E-05	2.3E-01	1.8E-05	1.3E-01			2.6E-08	2.3E-04	1.8E-08	1.3E-04
					Magnesium		1.8%		5.3E-05	4.6E-01	3.5E-05	2.6E-01			5.3E-08	4.6E-04	3.5E-08	2.6E-04
					Nickel	7440-02-0			0.0E+00	0.0E+00	0.0E+00	0.0E+00			0.0E+00	0.0E+00	0.0E+00	0.0E+00
					Phosphorus	7723-14-0			0.0E+00	0.0E+00	0.0E+00	0.0E+00			0.0E+00	0.0E+00	0.0E+00	0.0E+00
					Silicon				1.5E-05	1.3E-01	9.7E-06	7.3E-02			1.5E-08	1.3E-04	9.7E-09	7.3E-05
					Aluminum		94.7%		2.8E-03	2.4E+01	1.8E-03	1.4E+01			2.8E-06	2.4E-02	1.8E-06	1.4E-02
									0.0E+00	0.0E+00	0.0E+00	0.0E+00			0.0E+00	0.0E+00	0.0E+00	0.0E+00
									0.0E+00	0.0E+00	0.0E+00	0.0E+00			0.0E+00	0.0E+00	0.0E+00	0.0E+00

- Notes:
1. Unrestricted uncontrolled media usage based on 24 hours/day, 356 days/yr of dry cutting.
 2. Restricted uncontrolled media usage based on maximum actual daily use rate, two 8-hour shifts using 2 laser cutters approx. 50% of time; (32 hours)=16 hrs, 6 days/week, 52 weeks/yr dry cutting; Materials consist of 11% stainless, 22% steel, 67% aluminum.
 3. TAP material compositions are based on material test certificates when listed or from Safety Data Sheet; max. test certificate composition applied.
 4. 180 milligrams of respirable particulate/minute dry cutting steel, 111 milligrams of respirable particulate/minute dry cutting stainless steel, and 22 milligrams of respirable particulate/minute dry cutting aluminum. M.A.Ebadian. Size Distribution and Rate of Production of Airborne Particulate Matter Generated during Metal Cutting. U.S. Department of Energy, Office of Environmental Management, Office of Science and Technology.
 5. Dust Control system (Endurex B16 ePTFE Filter). Efficiency for particle size 0.2 - 2 micrometer = 99.9%
 6. Emission Factor 0.00022 lbs Cr+6/lbs per lb Cr, From SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, PAGE 1 of 9, APP. NUMBERS 480171/2, Coating, Printing, Aerospace and Chemical Operations Team, Reviewed by APPLICATION PROCESSING AND CALCULATIONS DATE 07/30/08, AMERICAN SECURITY PRODUCTS, INC., Jul-08.

Table 3-3(b)
Laser Cutting Process - Summary
In the Ditch Towing Products, Mountain Home, ID

TAP Emissions Summary	TAP Type (24 hr or Annual Avgd EL)	EL	Unrestricted Uncontrolled Emissions (lb/hr)	Restricted Uncontrolled Emissions (lb/hr)	Restricted Controlled Emissions (lb/hr)
Chromium	585 (24 hr)	3.30E-02	4.6E-04	3.1E-04	3.1E-07
Chromium+6	586 (Annual)	5.60E-07	1.0E-07	6.8E-08	5.8E-11
Copper Fume	585 (24 hr)	1.30E-02	2.3E-04	1.6E-04	1.6E-07
Iron Oxide Fume	585 (24 hr)	3.33E-01	9.5E-03	6.3E-03	6.3E-06
Manganese Fume	585 (24 hr)	6.70E-02	2.3E-04	1.5E-04	1.5E-07
Molybdenum	585 (24 hr)	3.33E-01	8.7E-05	5.8E-05	5.8E-08
Magnesium	585 (24 hr)	6.67E-01	5.3E-05	3.5E-05	3.5E-08
Nickel	586 (Annual)	2.75E-05	2.0E-04	1.3E-04	1.1E-07
Phosphorus	585 (24 hr)	7.00E-03	7.9E-05	5.3E-05	5.3E-08
Silicon	585 (24 hr)	6.67E-01	1.0E-04	6.7E-05	6.7E-08
Aluminum	585 (24 hr)	6.67E-01	2.8E-03	1.8E-03	1.8E-06

HAP Emissions Summary	Restricted Controlled Emissions (lb/yr)	Restricted Controlled Emissions (tons/yr)
Chromium	2.3E-03	1.1E-06
Manganese	1.0E-03	5.0E-07
Nickel	9.8E-04	4.9E-07

Criteria Pollutant Emissions Summary	Unrestricted Uncontrolled Emissions (lbs./hr.)	Unrestricted Uncontrolled Emissions (lbs./yr)	Unrestricted Uncontrolled Emissions (tons/yr)	Restricted Uncontrolled Emissions (lbs./hr)	Restricted Uncontrolled Emissions (lbs./yr)	Restricted Uncontrolled Emissions (tons/yr)	Restricted Controlled Emissions (lbs./hr)	Restricted Controlled Emissions (lbs./yr)	Restricted Controlled Emissions (tons/yr)
PM _{2.5/10}	0.013	116	0	8.80E-03	66	0.033	8.80E-06	6.59E-02	3.30E-05

Table 3-4(a)

Metal Saw Cutting Process - HAP and TAP
 In the Ditch Towing Products, Mountain Home, ID

Material	Estimated Max Cut Mass under Unrestricted Use ¹		Estimated Max Cut Mass under Restricted Use		TAP Constituents ²	CAS Number	Constituent Concentration (max wt%)	Emission Factor (lb/lb) ³	Unrestricted Uncontrolled Emissions		Restricted Uncontrolled Emissions		Control Equipment Efficiency (%) ⁴	Unrestricted Controlled Emissions		Restricted Controlled Emissions		
	lb/day	lb/yr	lb/day	lb/yr					lb/hr	lb/yr	lb/hr	lb/yr		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr
Aluminum	2.7	856	1.8	571	Chromium Total	7440-47-3	0.20%	0.02	4.6E-06	3.4E-02	3.0E-06	2.3E-02	0.00%	4.6E-06	3.4E-02	3.0E-06	2.3E-02	
					Copper	7440-50-8	4.9%		1.1E-04	8.4E-01	7.5E-05	5.6E-01		1.1E-04	8.4E-01	7.5E-05	5.6E-01	
					Iron	1309-37-1	0.5%		1.1E-05	8.6E-02	7.6E-06	5.7E-02		1.1E-05	8.6E-02	7.6E-06	5.7E-02	
					Manganese	7439-96-5	0.9%		2.1E-05	1.5E-01	1.4E-05	1.0E-01		2.1E-05	1.5E-01	1.4E-05	1.0E-01	
					Magnesium		1.8%		4.1E-05	3.1E-01	2.7E-05	2.1E-01		4.1E-05	3.1E-01	2.7E-05	2.1E-01	
					Nickel	7440-02-0			0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
					Phosphorus	7723-14-0			0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
					Silicon		0.5%		1.1E-05	8.6E-02	7.6E-06	5.7E-02		1.1E-05	8.6E-02	7.6E-06	5.7E-02	
					Aluminum		94.7%		2.2E-03	1.6E+01	1.4E-03	1.1E+01		2.2E-03	1.6E+01	1.4E-03	1.1E+01	
									0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
			0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00							

Notes:

Notes:

1. Restricted uncontrolled media usage based on maximum actual use data collected by In the Ditch.
2. TAP material compositions are based on material test certificates when listed or from Safety Data Sheet; max. test certificate composition applied.
3. Assume 0.02 lb/lb emission factor
4. No dust control is in place.

Table 3-4(b)
 Metal Saw Cutting Process - Summary
 In the Ditch Towing Products, Mountain Home, ID

TAP Emissions Summary	TAP Type (24 hr or Annual Avgd EL)	EL	Unrestricted Uncontrolled Emissions (lb/hr)	Restricted Uncontrolled Emissions (lb/hr)	Restricted Controlled Emissions (lb/hr)
Aluminum	585 (24 hr)	6.67E-01	2.17E-03	1.44E-03	1.4E-03

HAP Emissions Summary	Restricted Uncontrolled Emissions (lb/yr)	Restricted controlled Emissions (tons/yr)

Criteria Pollutant Emissions Summary	Unrestricted Uncontrolled Emissions (lbs./hr.)	Unrestricted Uncontrolled Emissions (lbs./yr)	Unrestricted Uncontrolled Emissions (tons/yr)	Restricted Uncontrolled Emissions (lbs./hr)	Restricted Uncontrolled Emissions (lbs./yr)	Restricted Uncontrolled Emissions (tons/yr)	Restricted Controlled Emissions (lbs./hr)	Restricted Controlled Emissions (lbs./yr)	Restricted Controlled Emissions (tons/yr)
PM _{2.5/10}	0.002	17	0.01	0.002	11	0.006	1.5E-03	11	0.006

Table 3-5(a)

Washing Process - TAP

In the Ditch Towing Products, Mountain Home, ID

TAP Composition		Nitric Acid ¹	Sodium Carbonate ¹	Potassium Hydroxide ¹	Alcohols, C8-10, ethoxylated propoxylated ¹	3-aminopropyltriethoxysilane ¹	Dihydrogen hexafluorozirconate (2-) ¹
CAS#		7697-37-2	497-19-8	1310-58-3	68603-25-8	919-30-2	12021-95-3
TAPS?		Yes	No	Yes	No	No	No
TAP EL lbs./hr.		0.333		0.133			
Process							
DURALINK 450	Corrosion Resistance Enhancer	Gals/mont 55				5%	5%
		Gals./hr ² 0.10				2.39E-03	2.39E-03
DURATEC 602		Gals/mont 55	1%				5%
		Gals./hr ² 0.10	4.77E-04				2.39E-03
GF CLEAN 1052	Alkaline Cleaner	Gals/mont 165	10%	10%	5%		
		Gals./hr ² 0.29	1.43E-03	1.43E-03	1.29E-02		

Notes:

1, Assuming the following emission factors for chemicals based on their boiling points (90% for volatile, 50% for semi-volatile, 5% for nearly non-volatile)

Nitric acid - 50% (semi-volatile)

Sodium Carbonate -5% (nearly non-volatile)

Potassium Hydroxide - 5% (nearly non-volatile)

Alcohols, C8-10, ethoxylated propoxylated - 90% (Volatile)

3-aminopropyltriethoxysilane - 50% (semi-volatile)

Dihydrogen hexafluorozirconate(2-) - 50% (semi-volatile)

2, assuming 24 working days in a month

Table 3-5(b)

Coating/Painting Process Analysis

In the Ditch Towing Products, Mountain Home, ID

Max. PTE Restricted Daily Use (lb/day)	Max. PTE Restricted Annual Use (lbs./year)	Maker	Coating Material (see Notes)	Density	Solids	BARIUM SULFATE 7727-43-7	1,3,5-Triglycidyl Isocyanurate 2451-62-9	Crystalline silica (Quartz) (Respirable) 14808-60-7	Carbon Black 1333-86-4		
				lb/gal	Weight Percentage Content Data						
75	23400	TCI	LC SD NOVAE BLACK II 9930-92357	10.84	100.00%	20.0%	10.0%	0.0%	5.0%		
75	23400	TCI	TEX BLACK 9012-9000	12.51	100.00%	40.0%	5.0%	1.0%	5.0%		
			TAP					Yes	Yes		
			HAP								
		Maker	Coating Material	Density	Solids	BARIUM SULFATE 7727-43-7	1,3,5-Triglycidyl Isocyanurate 2451-62-9	Crystalline silica (Quartz) (Respirable) 14808-60-7	Carbon Black 1333-86-4		
Hourly Spray Calculations (lb/hr) (Based on 24-hr averaging period, see sample calc below)				lb/gal	Pounds per Hour						
		TCI	LC SD NOVAE BLACK II 9930-92357	10.84	3.13	0.63	0.31	0.00	0.16		
		TCI	TEX BLACK 9012-9000	12.51	3.13	1.25	0.16	0.03	0.16		
				Spray Total (lb/hr)			6.25	1.88	0.47	0.03	0.31
Annual Spray Calculations (tons/yr)	Maker	Coating Material	Density	Solids	BARIUM SULFATE 7727-43-7	1,3,5-Triglycidyl Isocyanurate 2451-62-9	Crystalline silica (Quartz) (Respirable) 14808-60-7	Carbon Black 1333-86-4			
(See sample calc below)				lb/gal	Tons per Year						
	TCI	LC SD NOVAE BLACK II 9930-92357	10.84	11.70	2.34	1.17	0.00	0.59			
	TCI	TEX BLACK 9012-9000	12.51	11.70	4.68	0.59	0.12	0.59			
			Spray Total (tons/yr)			23.40	7.02	1.76	0.12	1.17	

Table 3-5(c)

Coating/Painting Emission Summary

In the Ditch Towing Products, Mountain Home, ID

Toxic Air Pollutants	CAS	Restricted Maximum Spray Rate ¹ (lb/hr)	Spray Retention Rate ² (%)	Restricted Potential to Emit (lb/hr)	Paint Filter Efficiency ³ (%)	Controlled Emission Rate (lb/hr)
Crystalline silica (Quartz) (Respirable)	14808-60-7	0.03	85%	0.0047	88%	5.6E-04
Carbon black	1333-86-4	0.31	85%	0.0469	88%	5.6E-03

Criteria Air Pollutants	Maximum Spray Rate ¹		Spray Retention Rate ²	Potential to Emit		Paint Filter Efficiency ³	Controlled Emissions	
	lb/hr	ton/yr	%	lb/hr	ton/yr	%	lb/hr	ton/yr
PM ₁₀	6.25	23.40	85%	0.94	3.51	88.0%	0.113	0.42
PM _{2.5}	6.25	23.40	85%	0.94	3.51	88.0%	0.113	0.42
VOC	0.00	0.00	0%	0.00	0.00	0%	0.00	0.00

Hazardous Air Pollutants (HAP)	CAS	Maximum Spray Rate ¹ (ton/yr)	Spray Retention Rate (%)	Potential to Emit (ton/yr)
None				

Notes:

1. The maximum hourly or annual Spray Total of the coatings.
2. Non-volatile emissions are calculated using a coating retention rate of 85%.
3. Uncontrolled non-volatile TAP emissions are calculated with a removal efficiency of 0%. Controlled PM emissions are calculated using an exhaust filter removal efficiency of 98%

Table 4-1
Facility-Wide Unrestricted Criteria Regulated Pollutant Emissions
 In the Ditch Towing Products, Mountain Home, ID

Table 4-1: Pre-Project Potential to Emit

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Greenhouse Gases CO ₂ e
	tons/yr								
Heaters	6.36E-02	6.36E-02	5.02E-03	8.37E-01	7.03E-01	4.60E-02	4.18E-06	1.58E-02	1.00E+03
Welding	7.40E-01	7.40E-01						2.37E-01	
Laser Cutting	3.21E+01	3.21E+01						1.45E+00	
Plasma Cutting	3.48E+00	3.48E+00						7.18E-02	
Coatings	6.32E-01	6.32E-01				4.54E+01		2.44E-02	
Metal Saw and Grinding	8.56E-03	8.56E-03							
Solvent Recovery						8.88E-03		8.88E-03	
Total =	9.95E+01	9.95E+01	5.02E-03	8.37E-01	7.03E-01	4.54E+01	4.18E-06	1.80E+00	1.00E+03

Table 4-1b: Post-Project Potential to Emit (based on maximum continuous operations)

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Greenhouse Gases CO ₂ e
	tons/yr								
Heaters ¹	4.59E-01	4.59E-01	3.63E-02	6.05E+00	5.08E+00	3.33E-01	3.02E-05	1.14E-01	7.23E+03
Welding	1.45E+00	1.45E+00						6.71E-02	
Laser Cutting	5.78E-02	5.78E-02						3.87E-03	
Plasma Cutting									
Coatings	1.47E+01	1.47E+01				0.00E+00		0.00E+00	
Metal Saw and Grinding	8.56E-03	8.56E-03							
Solvent Recovery									
Total =	1.67E+01	1.67E+01	3.63E-02	6.05E+00	5.08E+00	3.33E-01	3.02E-05	1.85E-01	7.23E+03

Table 4-1c: Changes in Potential to Emit (based on maximum continuous operations)

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Greenhouse Gases CO ₂ e
	tons/yr								
Heaters	3.96E-01	3.96E-01	3.13E-02	5.21E+00	4.38E+00	2.86E-01	2.60E-05	9.83E-02	6.23E+03
Welding	7.13E-01	7.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.70E-01	0.00E+00
Laser Cutting	-3.20E+01	-3.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.44E+00	0.00E+00
Plasma Cutting	-3.48E+00	-3.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.18E-02	0.00E+00
Coatings	-4.84E+01	-4.84E+01	0.00E+00	0.00E+00	0.00E+00	-4.54E+01	0.00E+00	-2.44E-02	0.00E+00
Metal Saw and Grinding	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Solvent Recovery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.88E-03	0.00E+00	-8.88E-03	-1.00E+03
Total =	-8.28E+01	-8.28E+01	3.13E-02	5.21E+00	4.38E+00	-4.51E+01	2.60E-05	-1.61E+00	6.23E+03

Notes:

1, the unrestricted annual usage (8760hr) of natural gas burning units is estimated to be 121 MMSCF/yr, and the proposed restricted usage is 39.9 MMSCF/yr, resulting an overall duty rate of 0.33 (39.9/121). The unrestricted emissions for heaters are calculated as: restricted emission/0.33.

Table 4-2
Facility-Wide Restricted Criteria Regulated Pollutant Emissions
 In the Ditch Towing Products, Mountain Home, ID

Table 4-2: Pre-Project Potential to Emit

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Total ¹	Greenhouse Gases CO ₂ e
	tons/yr									
Heaters	6.36E-02	6.36E-02	5.02E-03	8.37E-01	7.03E-01	4.60E-02	4.18E-06	1.58E-02		1.00E+03
Welding	1.51E-01	1.51E-01						2.26E-03		
Laser Cutting	3.66E-04	3.66E-04						1.36E-05		
Plasma Cutting	3.71E-01	3.71E-01						7.69E-03		
Coatings	3.01E-01	3.01E-01				1.08E+01		5.80E-03		
Metal Saw and Grinding	5.71E-03	5.71E-03								
Solvent Reocvery						8.88E-03		8.88E-03		
Total =	8.92E-01	8.92E-01	5.02E-03	8.37E-01	7.03E-01	1.08E+01	4.18E-06	3.16E-02	0.00E+00	1.00E+03

Table 4-1b: Post-Project Potential to Emit (based on maximum continuous operations)

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Total ¹	Greenhouse Gases CO ₂ e
	tons/yr									
Heaters	1.52E-01	1.52E-01	1.20E-02	2.00E+00	1.68E+00	1.10E-01	9.98E-06	3.77E-02		2.38E+03
Welding	2.96E-01	2.96E-01						1.60E-02		
Laser Cutting	3.30E-05	3.30E-05						2.13E-06		
Plasma Cutting										
Coatings	4.21E-01	4.21E-01				0.00E+00		0.00E+00		
Metal Saw and Grinding	5.71E-03	5.71E-03								
Solvent Reocvery										
Total =	8.74E-01	8.74E-01	1.20E-02	2.00E+00	1.68E+00	1.10E-01	9.98E-06	5.37E-02		2.38E+03

Table 4-1c: Changes in Potential to Emit (based on maximum continuous operations)

Emissions Unit	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	CO	VOC	Lead	HAPs	Total ¹	Greenhouse Gases CO ₂ e
	tons/yr									
Heaters	8.80E-02	8.80E-02	6.95E-03	1.16E+00	9.73E-01	6.37E-02	5.79E-06	2.19E-02		1.38E+03
Welding	1.45E-01	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02		0.00E+00
Laser Cutting	-3.33E-04	-3.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.15E-05		0.00E+00
Plasma Cutting	-3.71E-01	-3.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.69E-03		0.00E+00
Coatings	1.20E-01	1.20E-01	0.00E+00	0.00E+00	0.00E+00	-1.08E+01	0.00E+00	-5.80E-03		0.00E+00
Metal Saw and Grinding	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Solvent Reocvery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.88E-03	0.00E+00	-8.88E-03		0.00E+00
Total =	-1.81E-02	-1.81E-02	6.95E-03	1.16E+00	9.73E-01	-1.07E+01	5.79E-06	2.21E-02		1.38E+03

Table 4-3

Criteria Pollutant Restricted Controlled Emissions
 In the Ditch Towing Products, Mountain Home, ID

Max Restricted Controlled PTE Criteria Air Pollutants	Pre-project Estimated Emission Rate	Post-project Estimated Emission Rate	Emission Increase	10% Significant Emission Rate	BRC Exemption
	(T/yr)	(T/yr)	(T/yr)	(T/yr)	Below 10% Sig. Rate? (Y/N)
NO ₂	2.14	3.30	1.16	4	Yes
CO	0.70	1.68	0.97	10	Yes
PM	0.89	0.87	-0.02	2.5	Yes
PM ₁₀	0.89	0.87	-0.02	1.5	Yes
PM _{2.5}	0.89	0.87	-0.02	1	Yes
SO _x	5.02E-03	1.20E-02	6.95E-03	4	Yes
VOC	1.09E+01	1.10E-01	-1.07E+01	4	Yes
Lead	4.18E-06	9.98E-06	5.79E-06	0.06	Yes

IDAPA.58.01.01.221: Category 1 Exemption

If a permitting action would qualify for a below regulatory concern (BRC) exemption (Idaho Air Rules Section 221) except for the emissions quantities of some specific criteria pollutants, then modeling is not required for those pollutants having emissions rates below the BRC threshold. (State of Idaho Guideline For Performing Air Quality Impact Analyses, Doc. ID AQ-011 (September 2013), Page 11.).

Table 4-4

Facility-Wide Toxic Air Pollutant Emissions
In the Ditch Towing Products, Mountain Home, ID

Non-Carcinogenic Toxic Air Pollutant (24 hr Average)	Restricted Controlled Hourly Emissions		Controlled Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Controlled Exceeds TAP EL?
	Pre-Project (lb/hr)	Post Project (lb/hr)			
Barium	8.41E-06	2.00E-05	1.16E-05	3.30E-02	No
Carbon Black	1.00E-03	5.63E-03	4.63E-03	2.30E-01	No
Chromium	8.23E-05	2.06E-05	-6.17E-05	3.30E-02	No
Cobalt	1.60E-07	1.37E-05	1.35E-05	3.30E-03	No
Copper	1.08E-03	1.88E-04	-8.92E-04	6.70E-02	No
Dichlorobenezene	2.29E-06	5.47E-06	3.17E-06	2.00E+01	No
Iron Oxide Fume	1.32E-01	6.87E-02	-6.32E-02	3.33E-01	No
Manganese	1.99E-03	6.66E-06	-1.98E-03	6.70E-02	No
Mercury	4.97E-07	1.18E-06	6.88E-07	3.00E-03	No
Molybdenum	9.98E-04	1.23E-05	-9.86E-04	3.33E-01	No
Naphthalene	1.17E-06	2.78E-06	1.61E-06	3.33E+00	No
Phosphorous	9.95E-04	6.46E-06	-9.88E-04	7.00E-03	No
Selenium	4.58E-08	1.09E-07	6.35E-08	1.30E-02	No
Silicon	1.52E-03	1.21E-03	-3.08E-04	6.67E-01	No
Vanadium	8.05E-06	1.77E-05	9.69E-06	3.00E-03	No
Zinc	5.54E-05	1.32E-04	7.67E-05	6.67E-01	No
Carcinogenic Toxic Air Pollutant (Annual Average)	Restricted Controlled Hourly Emissions		Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Controlled Exceeds TAP EL?
	Pre-Project (lb/hr)	Post Project (lb/hr)			
Arsenic	3.8E-07	9.1E-07	5.3E-07	1.5E-06	No
Benzene	4.0E-06	9.6E-06	5.6E-06	8.0E-04	No
Beryllium	3.2E-08	8.0E-08	4.8E-08	2.8E-05	No
Cadmium	2.1E-06	5.0E-06	2.9E-06	3.7E-06	No
Chromium+6	1.4E-06	4.2E-08	-1.3E-06	5.6E-07	No
Formaldehyde	1.4E-04	3.4E-04	2.0E-04	5.1E-04	No
3-Methylchloranthene	3.4E-09	8.2E-09	4.8E-09	2.5E-06	No
Nickel	5.1E-05	2.5E-05	-2.61E-05	2.7E-05	No
Polyaromatic Hydrocarbon (Max)	1.3E-06	3.1E-06	1.8E-06	9.1E-05	No
Polycyclic Organics: 7-PAH Group	2.2E-08	5.2E-08	3.0E-08	2.0E-06	No

Process	Cadmium	Cadmium of Total	Ni	Ni % of Total
Heater	5.0E-06	100%	9.6E-06	38%
welding	0.0E+00	0%	1.6E-05	62%
Laser	0.0E+00	0%	1.1E-07	0%
Coating	0.0E+00	0%	0.0E+00	0%
Washing	0.0E+00	0%	0.0E+00	0%
Coating	0.0E+00	0%	0.0E+00	0%
Metal Saw	0.0E+00	0%	0.0E+00	0%
Solvent Recovery	0.0E+00	0%	0.0E+00	0%
	5.0E-06		2.5E-05	

Table 4-5

Facility-Wide Hazardous Air Pollutant Emissions
 In the Ditch Towing Products, Mountain Home, ID

Hazardous Air Pollutant	Pre-project Restricted Controlled Potential to Emit (tons/yr)	Post-project Restricted Controlled Potential to Emit (tons/yr)
Arsenic	1.7E-06	4.0E-06
Benzene	1.8E-05	4.2E-05
Beryllium	1.4E-07	3.5E-07
Cadmium	9.2E-06	2.2E-05
Chromium	3.2E-04	8.0E-05
Cobalt	7.0E-07	2.1E-04
Dichlorobenzene	1.0E-05	2.4E-05
Formaldehyde	6.3E-04	1.5E-03
Hexane	1.5E-02	3.6E-02
Lead	4.2E-06	1.0E-05
Manganese	7.4E-03	1.6E-02
Mercury	2.2E-06	5.2E-06
Toluene		6.8E-05
Nickel	2.3E-04	1.1E-04
Polycyclic Organic Matter (PAH MAX.)	9.5E-08	1.4E-05
Selenium	2.0E-07	4.8E-07
TOTAL =	0.024	0.054

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on June 23, 2021:

Facility Comment: Condition 1.1 – Facility provided a revised Permit Scope Purpose to add clarification on changes occurring on the permit.

DEQ Response: DEQ will make the requested changes.

Facility Comment: Table 1.1 – ITD requests that the gun transfer efficiencies be changed to 85% to be consistent with the transfer efficiencies used in emission inventory calculations. In section 3.6 of the permit application, In the Ditch provided references to show that transfer efficiency of powder coating is better than 90% in several studies. For the purpose of estimating emissions, 85% transfer efficiency is applied for non-volatile coating constituents.

DEQ Response: The 65% was based on the gun transfer efficiency as listed in the application on Form EU6. Based on the request and references, the DEQ will allow the gun transfer efficiency to be changed to 85%. In addition, condition 3.6 will remove the 65% transfer efficiency documentation requirement.

Facility Comment: Condition 3.3 and 3.7 – ITD requests that proposed Washing Process Throughput limits be removed. Firstly, Table 3.2 shows washing emission limits as 0.0. Consequently, since there are effectively no emission limits throughput limits are not necessary.

Secondly, the washing process emission rates are insignificantly low. The emission rates in the PTC Application Emission Inventory Table 3-5(a) are in gallons/hr and need to be converted to pounds/hr. A revised Table 3-5(a) is attached.

The Emission Inventory shows that TAPs from this process are conservatively estimated to be nitric acid 0.14% of the TAP EL ($4.77E-04/3.33E-01$) and potassium hydroxide 11% of the TAP EL ($1.45E-02/1.33E-1$). Even at max. estimated use the emissions are insignificant relative to EL standards and do not warrant emission or throughput limits to assure compliance. The DEQ-proposed throughput limits require a recordkeeping burden that is an unnecessary administrative burden and not needed to assure compliance with emission standards.

DEQ Response: Based on the SDS and calculation methodology, a usage rate of approximately 2.64 gallons per hour of GF Clean 1052 would exceed the EL for Potassium Hydroxide. The facility calculated emissions based on a usage rate of 0.29 gallons per hour, which was determined using a monthly throughput limit of 165 gallons, 24 days of operations per month, and 24 hours of usage per day.

TAP emissions included in the cleaning materials need to be accounted for on a facility wide basis. DEQ will change Table 3.2 to include coating and washing materials with one combined limit. The washing material throughput limits and monitoring will remain as written to ensure a facility wide TAP compliance.

Facility Comment: Conditions 3.8, 3.9, 3.10, and 3.11 – The facility requested the removal of washing materials from the Alternative Coating and Washing Usage Scenarios in. Additionally, the facility requests to estimate emissions of criteria pollutants in tons/year in Condition 3.8.

DEQ Response: Those conditions allow new materials to be used if an analysis is done to show compliance with both criteria pollutants and TAP screening emissions levels. Any new coating or washing material is required to perform the analysis to determine compliance prior to use. DEQ will leave the washing material requirements in these conditions to show compliance on a facility wide basis for any new material to be used at the facility.

Calculating emissions for a daily coating scenario in condition 3.8 should be compared with the hourly rates. Yearly rates are not appropriate in this case for calculating daily coating scenarios.

Facility Comment: Condition 3.11 – The facility requests comparing the emissions from new coating and washing materials against the “10% Significant and BRC exemption limits, which are the applicable standards for $PM_{2.5}$ and PM_{10} emissions” instead of comparing with the permitted emission limits in Table 3.2.

DEQ Response: Table 3.2 is the permitted limit for all coating and washing materials. Any new material would replace the existing material for that day and still be required to show compliance with the permitted limits. Proposed daily usage scenarios shall not exceed any permitted limit. DEQ will leave the requirement as written in the permit condition.

Facility Comment: Condition 3.11 - The emission limits in Table 3.2 are established based on the maximum usage of coatings included in this permit application. In an alternative coating usage scenario, In the Ditch would be evaluating new coatings. As a result, the total PM/VOC emissions from all coating materials may increase, and it is not equitable to require comparison with the limits in Table 3.2. It is more reasonable to compare the total emissions under alternative usage scenario with the PM2.5 1 ton/yr., PM10 1.5 tons/yr, and VOC 4 tons/yr. 10% Significant and BRC exemption limits, which are the applicable standards for PM2.5, PM10, and VOC emissions.

DEQ Response: As in the previous comment/response, the limits in Table 3.2 are for all coating and washing materials. Any new material will be required to comply with those limits. DEQ will leave the requirement as written in the permit condition.

Facility Comment: Condition 3.13 - ITD requests that annual Coating Usage Scenario reporting is only required if a new Coating Usage Scenario is implemented during the previous 365-day period.

DEQ Response: DEQ will revise the condition to the current standard language below:

Each year, for Coating Usage Scenarios that have not already been submitted, the permittee shall submit a report by May 1st on all unapproved Daily Coating Usage Scenarios used each calendar day during the previous 365-day period. The report shall include documentation supporting the TAP compliance demonstrations and the Coating Emission Limit compliance demonstrations relied upon for each Daily Coating Usage Scenario, and any modeling analyses conducted in each coating TAP compliance demonstration. Documentation should be in sufficient detail, including documentation of all calculations and electronic copies of modeling files, such that DEQ can verify the analysis. The report shall be titled "Permit-Required TAP Compliance Report" and shall be sent to:

Facility Comment: Condition 4.3 - ITD requests that proposed Laser Cutting limits be removed. The Emission Inventory shows that the TAP emissions are insignificant relative to their respective emission screening levels (ELs) and do not warrant limits to assure compliance. The TAP with the highest % EL is nickel and is only 0.4% of the EL; the other laser cutting TAPs %ELs are even lower, as shown below:

Cr+6 0.01033%	P 0.00076%	Mg 0.00001%
Cu fume 0.00120%	Cr 0.00093%	Si 0.00001%
Iron oxide fume 0.00190%	Al 0.00028%	
Mn fume 0.00023%	Mb 0.00002%	

The limits require a recordkeeping burden that is an unnecessary administrative burden and not needed to assure compliance with emission standards.

DEQ Response: The laser cutting has particulate and TAP emissions that must be accounted for on a facility wide basis. The emissions inventory for laser cutting was calculated based on estimated operational hours and not 8,760 hours. Additionally, the combined TAP emissions for the facility must show compliance with the EL's. Laser cutting will remain in the permit

Facility Comment: Condition 4.6 - ITD requests that proposed Laser Cutting Operating hour limits be removed. As described in Comment No. 8 above, the Emission Inventory shows that the TAP emissions are insignificant relative to their respective emission screening levels (ELs) and do not warrant limits to assure compliance.

DEQ Response: TAP emissions that must be accounted for on a facility wide basis. The permit condition will remain as written.

Facility Comment: Condition 4.8 - This recordkeeping requirement is unnecessary to assure compliance and should be eliminated. The recordkeeping requirement is an unnecessary administrative burden and not needed to assure compliance with emission standards. See Comment Nos. 8 and 9 above.

DEQ Response: The facility will be required to monitor the hours of operation of each laser to show compliance with the calculated emission rates in Table 4.2. The permit condition will remain as written.

APPENDIX C – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Inventive LLC dba In The Ditch
Address: 2915 Industrial Way
City: Mountain Home
State: Idaho
Zip Code: 83647
Facility Contact: Kyle Davis
Title: Mecanical Engineer
AIRS No.: 030-00036

- N** Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- Y** Did this permit require engineering analysis? Y/N
- N** Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	1.2	0	1.2
SO ₂	0.0	0	0.0
CO	1.0	0	1.0
PM10	0.0	0.01	0.0
VOC	0.0	10.74	-10.7
Total:			-8.6
Fee Due	\$ 1,000.00		

Comments: Coatings no longer have VOC's, increased throughputs on some equipment, and removal of plasma cutting