

APPLICATION ADMINISTRATIVE COMPLETENESS CHECKLIST

	REQUIREMENT	MEETS REQUIREMENTS			COMMENT
		YES	NO	N/A	
1	Has the standard application form been completed?	X			
2	Has the responsible official signed the standard application form?	X			
3	Has a process description been provided?	X			
4	Are the facility's emissions documented with all appropriate supporting information?	X			
5	Is the facility subject to Minor NSR requirements? If the answer is "YES" , answer 6a, 6b and 6c as applicable. If the answer is "NO", skip to 7.		X		
6.a	If the facility chooses to implement RACT, is the RACT determination included for the affected pollutants for all affected emission units?				
6.b	If the facility chooses to demonstrate compliance with NAAQS by screen modeling, is the modeling analysis included?				
6.c	If refined modeling has been conducted, is a comprehensive modeling report along with all modeling files included?				
7	Does the application include an equipment list with the type, name, make, model, serial number, maximum rated capacity, and date of manufacture?	X			
8	Does the application include an identification and description of Pollution Controls? (if applicable)			X	
9	For any application component claimed as confidential, are the requirements of AR.S. 49-432 and A.A.C. R18-2-305 addressed?			X	
10	For any current non-compliance issue, is a compliance schedule attached?			X	
11	For minor permit revision that will make a modification upon submittal of application, has a suggested draft permit been attached?			X	



AIR PERMIT RENEWAL APPLICATION COMPONENTS

- Permit Fee Schedule
- Standard Class II Permit Application Components
- Emission Source Form

Effective November 1, 2022

Application and Processing Fees

Individual Permits

Individual Permit Initial Application Fee	None
Individual Permit Processing Fee (per hour)	\$186.10
Accelerated Permit Deposit	\$15,000
Administrative Amendments and Permit Transfers	None

General Permits

General Permit Application Fee	\$500
Additional ATO Fee	\$500

Registration Application and Processing Fees..... None

Annual Fees – Class I and Class II Synthetic Minor

Emission Based Fee (Class I only) \$53.32/ton

Annual Administrative Fee (Class I and Title V Synthetic Minor Stationary Sources)

Aerospace	\$28,990	Paper Coaters.....	\$21,580
Air Curtain Destructors	\$1,050	Petroleum Products Terminals	\$31,680
Cement Plants.....	\$88,780	Polymeric Fabric Coaters	\$28,550
Combustion/Boilers	\$21,580	Reinforced Plastics.....	\$21,580
Compressor Stations.....	\$17,740	Semiconductors Fabrication	\$37,540
Electronics.....	\$28,560	Copper Smelters.....	\$88,780
Expandable Foam.....	\$20,460	Utilities - Fossil Fuel Fired Except	
Foundries	\$27,210	Coal	\$22,920
Landfills	\$22,250	Utilities - Coal Fired.....	\$45,400
Lime Plants.....	\$83,860	Vitamin/Pharmaceutical	\$22,020
Copper & Nickel Plants	\$20,910	Wood Furniture.....	\$21,580
Gold Mines.....	\$20,910	Others	\$28,560
Mobile Home Manufacturing	\$20,670	Others with Continuous Emission	
Paper Mills	\$28,550	Monitoring	\$28,560

Annual Administrative Fee (Non-Title V Synthetic Minor Stationary Sources) \$7,290

Annual Administrative Fee (Synthetic Minor Portable Sources) \$11,250

Annual Fees – Class II True Minor and Registrations

Title V

Individual Permit - Stationary Source	\$11,250
Individual Permit - Portable Source	\$11,250
General Permit.....	\$4,520

Non-Title V

Individual Permit - Stationary Source	\$7,290
Individual Permit - Portable Source	\$7,290
General Permit.....	\$3,020

Registrations None

Non-Title V vs. Title V status for the purpose of annual fees depends on the applicability of various federal regulations. Contact the Air Permits Unit at (602) 771-2338 for assistance in determining a facility's status.

SECTION 3.1
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD CLASS II PERMIT APPLICATION FORM

(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to (Business license name of organization that is to receive permit):
MI Metals, Inc.
2. Mailing Address: 301 Commerce Blvd
City: Oldsmar State: Florida ZIP: 33467
3. Name (or names) of Responsible Official: Brook Massey, President ; Mevin Mitchell, EH&S Director
Phone: 813-855-5695 Fax: 812-855-6677 Email: bmassey@mimetals.com
4. Facility Manager/Contact Person and Title: Melvin Mitchell, Environmental, Health, & Safety Director
Phone: 813-855-5695 Mobile: 727-599-4905 Email: mmitchell@mimetals.com
5. Facility Name: MI Metals - Prescott Valley Plant
Facility Location/Address (Current/Proposed): 7555 E. State Route 69, Suite B
City: Prescott Valley County: Yavapai ZIP: 86314
Indian Reservation (if applicable, which one): N/A
Latitude/Longitude, Elevation: 34° 34' 55" N 112° 18' 56" W, Elevation - 5,138 ft.
6. General Nature of Business: Aluminum Extrusion Manufacturing Facility
7. Type of Organization:
 Corporation Individual Owner Partnership Government Entity LLC
 Other _____
8. Permit Application Basis: New Source Revision Renewal of Existing Permit
For renewal or modification, include existing permit number (and exp. date): **#73219, Exp. 11/19/2023**
Date of Commencement of Construction or Modification:
Primary Standard Industrial Classification Code: 3354, 3479
9. I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the Permit. I will present a certification of compliance to ADEQ no less than annually and more frequently if specified by ADEQ. I further state that

I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Signature of Responsible Official:  _____

Printed Name of Signer/Official Title: Melvin Mitchell, EH&S Director

Date: 3/20/2023 Telephone Number: 813-855-5695

Required Air Permit Renewal Application Components

(as per AZDEQ Air Permit Renewal Application Filing Instructions -12/07/2021)

In addition to the Standard Application Form, the applicant shall provide the following:

A. A detailed description of each process at the facility

The facility manufactures aluminum extrusions for use in products and industry. The Site Location and Site Layout Maps have been provided in Appendix A (see Figures 1 and 2 respectively). An overview of process operations is listed below:

- **Extrusion**
 - Aluminum billets are heated and then extruded through a horizontal hydraulic extrusion press to form extrusions.
 - Extrusions are then transferred to an oven for homogenization.
 - Extrusions are then either shipped to customers or transferred to the paint line for coating.
- **Paint Line/ Coating**
 - Extrusions are washed in aqueous solution, oven dried, electrostatic coated in spray paint booths, and paint cured in an oven. Paint system consists of one spray line and two spray booths to control emissions from spray painting operations.
 - Solvents are utilized to clean up spray paint equipment and overspray in the paint booths.
- **Die Cleaning**
 - Die forms used in the process are cleaned in heated caustic baths to remove residual product.

B. A flow diagram for all processes

Please see Figure 3 – Process Flow Diagrams in Appendix A.

C. A description of alternate operating scenarios, if applicable

Not Applicable – no alternate operating scenarios.

D. Emissions Calculations

1. New Sources

Emission calculations for new sources shall include:

- a. The facility-wide Potential to Emit for criteria pollutants and hazardous air pollutants
- b. A detailed breakdown of emissions from each process

Please see Tables 2 thru 8 in Appendix C.

2. Modifications

Emission calculations for modifications shall include:

- a. The increase in Potential to Emit for the modified source
- b. A detailed breakdown of emissions from each process
- c. If new emission source(s) are being added, the Potential to Emit for each new source
- d. The facility-wide Potential to Emit before the modification and the facility-wide Potential to Emit after the modification

Not Applicable – no modifications.

3. Emissions shall be expressed in pounds per hour and tons per year.

Please see Tables 2 thru 5 and Table 7 in Appendix C.

4. Emission factors must be clearly documented. If manufacturer specifications or site-specific testing is being utilized to develop the emission factors, appropriate documentation should be provided. The Department may impose permit limits based on such emission factors with associated testing and monitoring provisions.

Please see Tables 2 thru 5 and Table 7 in Appendix C.

5. An electronic copy of the emission calculations should be included in the application.

Enclosed, please see the attached electronic copy of spreadsheets/calculations for Tables 1 thru 9 in Appendix C.

E. Minor NSR Applicability Determination facility

If a new stationary source has the Potential to Emit of a regulated minor NSR pollutant, or a modified source has an increase in the Potential to Emit of a regulated minor NSR pollutant, greater than or equal to the permitting exemption threshold, then that regulated minor NST pollutant is subject to minor NSR requirements. In that event, the applicant must either:

- a. Elect to have the Director perform a screening model of its emissions
- b. Implement Reasonably Available Control Technology (RACT)

A detailed explanation on how to select RACT can be found in the Department's Minor NSR Guidance document available online at:

<http://www.azdeq.gov/environ/air/permits/permitapplications.html>

Not Applicable.

F. An explanation of any proposed exemptions from otherwise applicable requirements.

Not Applicable - No proposed exemptions identified.

- G. Facilities that wish to accept voluntary limitations in order to avoid classification as a major source or a major modification, shall propose such limitations. If such limitations are acceptable to the Department, they will be incorporated into the permit and made enforceable by means of monitoring, recordkeeping, and/or performance testing.

Applicant proposes the following voluntary emission limitations (caps), same as the facility caps in the current and previous permits:

- **Volatile Organic Compounds (VOCs) emissions of < 90 ton/year**
- **Combined Federal Hazardous Air Pollutant (HAPs) emissions of < 22.5 ton/year**
- **Individual Federal HAP emissions of < 9 ton/year**

- H. A comprehensive equipment list which includes the make, model, serial number, equipment identification (ID) number, and date of manufacture of all process and control equipment (equipment other than those identified as insignificant activities). The date of manufacture must be included in order to determine applicability of regulations.

Please see Table 1 in Appendix C.

- I. A listing of all insignificant activities.

Please see Table 9 in Appendix C.

- J. Any application component that is identified as confidential shall follow the notice obligations in A.R.S. 49-432 and A.A.C. R18-2-305.

Not Applicable - Applicant does not identify any application components as “confidential.”

- K. For existing sources that are not currently in compliance with an applicable requirement, a compliance schedule should be attached which documents how the facility will achieve compliance with such requirement(s). The compliance schedule should include a time line of remedial measures, including an enforceable sequence of actions with milestones leading to compliance with the applicable requirement(s).

Not Applicable – existing sources are in compliance.

- L. Suggested draft permit language must be included in minor permit revision applications.

Not Applicable.



FIGURES

- Figure 1 – Site Location Map
- Figure 2 – Site Layout Map
- Figure 3 – Process Flow Diagrams

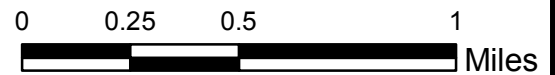


Figure 1

Site Location Map

MI Metals - Prescott Valley Plant
7555 East State Route 69, Suite B

Prescott Valley, AZ 86314
Yavapai County

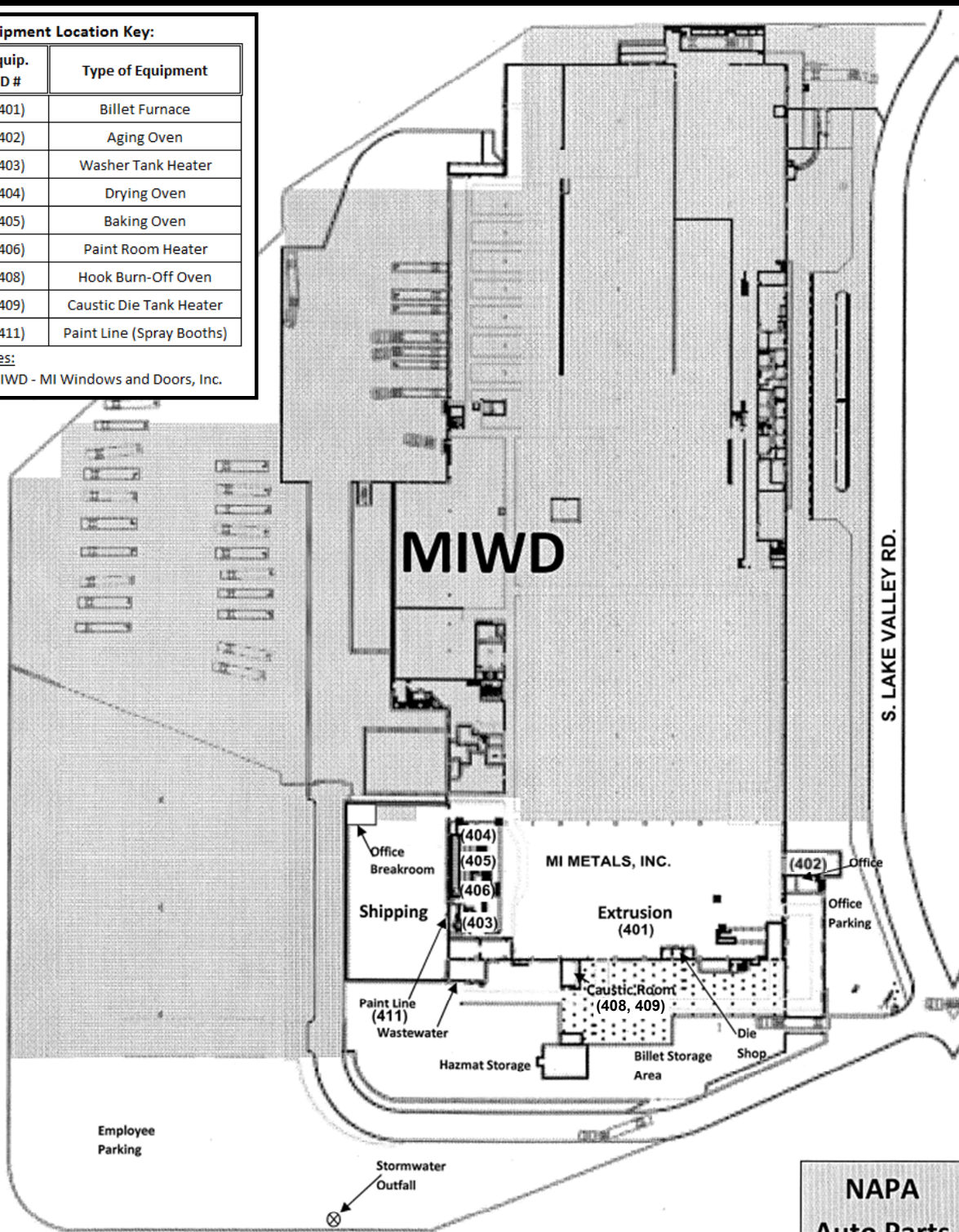


Equipment Location Key:

Equip. ID #	Type of Equipment
(401)	Billet Furnace
(402)	Aging Oven
(403)	Washer Tank Heater
(404)	Drying Oven
(405)	Baking Oven
(406)	Paint Room Heater
(408)	Hook Burn-Off Oven
(409)	Caustic Die Tank Heater
(411)	Paint Line (Spray Booths)

Notes:

MIWD - MI Windows and Doors, Inc.



(NOT TO SCALE)

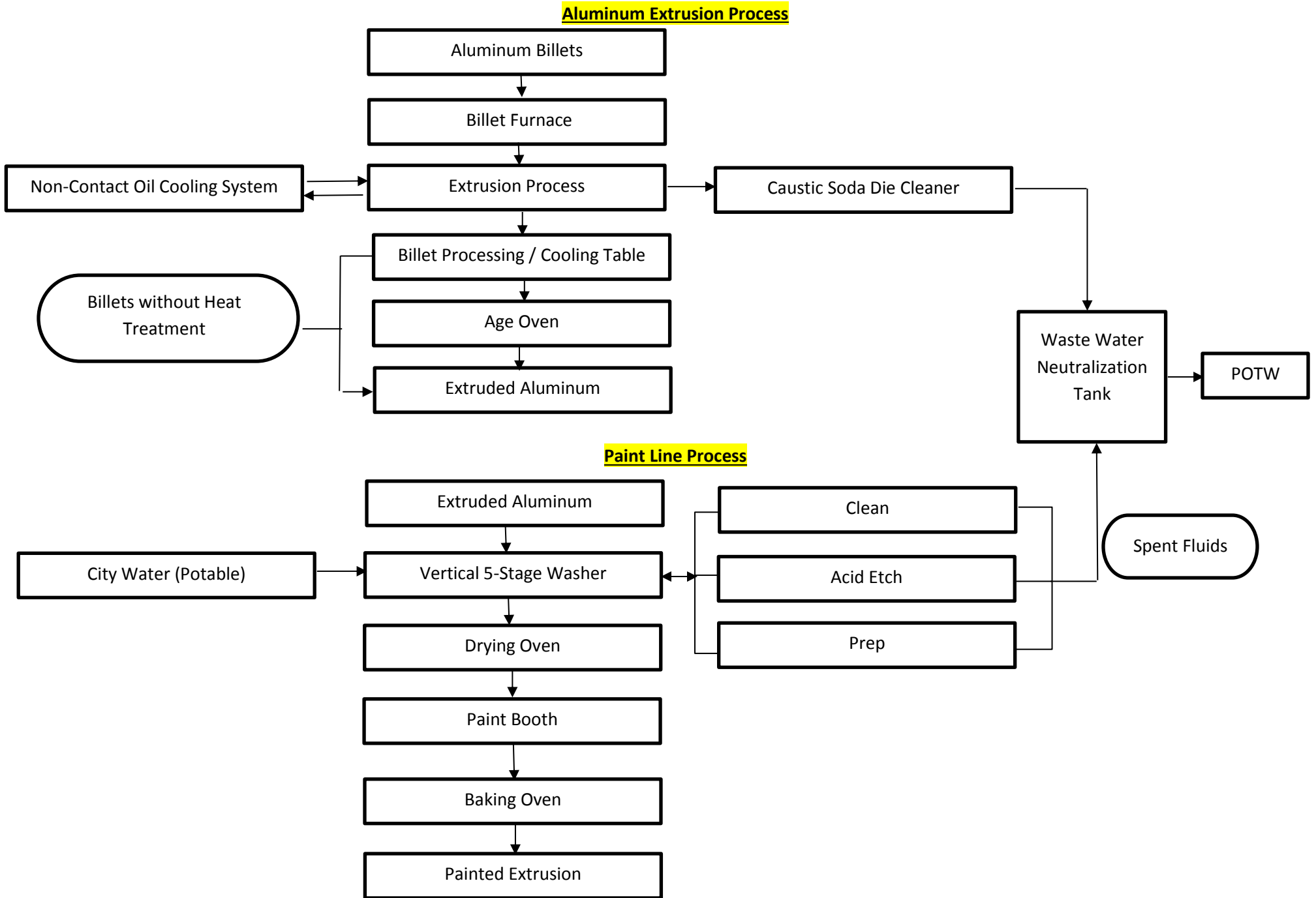
FIGURE 2

SITE LAYOUT MAP



MI Metals
Prescott Valley Plant

7555 East State Route 69, Suite B
Prescott Valley, AZ 86314
Yavapai County

FIGURE 3 – PROCESS FLOW DIAGRAMS




TABLES AND ELECTRONIC FILE

Table 1 – Equipment List

Table 2 – Estimated Emissions Summary

Table 3 – Combustion Units Estimated Criteria Pollutant Emissions

Table 4 – Combustion Units Estimated HAPs Emissions

Table 5 – Spray Booths Estimated VOCs and HAPs Emissions

Table 6 – Spray Usage Determination

Table 7 – Greenhouse Gas (GHG) Estimated Emissions

Table 8 – MI Metals 2022 Spray Usage Summary

Table 9 – Insignificant Activities List

Electronic File of Calculation/Spreadsheet Tables (Enclosed)



Table 1 - Equipment List

Equip. ID Number	Type of Equipment	Maximum Rated Capacity (Units)	Make	Model	Serial Number	Date of Manufacture
401	Billet Furnace	5.4 MMBTU/hr	Granco Clark	Hot Jet	9238-80	01/1980
402	Aging Oven	7 MMBTU/hr	Granco Clark	End Flow	14599	12/2007
403	Washer Tank Heater	1.6 MMBTU/hr	Eclipse	N/A	N/A	01/1980
404	Drying Oven	3 MMBTU/hr	Belco	N/A	7364-80	07/1980
405	Baking Oven	5 MMBTU/hr	Belco	N/A	7364-80	01/1980
406	Paint Room Heater	5.5 MMBTU/hr	Applied Air Sys	DFE-230-HRS	80-DFC-076-F03743	01/1980
408	Hook Burn-Off Oven	0.33 MMBTU/hr	Pollution CTL Pro	PTR-27-3280	N/A	01/1980
409	Caustic Die Tank Heater	0.15 MMBTU/hr	N/A	N/A	N/A	01/1980
411	Paint Line (Spray Booths)	11.1 Gallon/hr	Ransburg	6" Uni-Disk	19830-06	01/1980

Notes: MMBTU - million British Thermal Units
 hr - hour
 N/A - not applicable



Table 2 - Estimated Emissions Summary Table

Pollutant	Estimated Emissions		Total Estimated Emissions (lb/hr)	Estimated Emissions		Total Estimated Emissions (ton/yr)
	Combustion Units ⁽¹⁾ (401 - 406, 408, 409) (lb/hr)	Spray Line ⁽²⁾ (411) (lb/hr)		Combustion Units ⁽¹⁾ (401 - 406, 408, 409) (ton/yr)	Spray Line ⁽²⁾ (411) (ton/yr)	
Total Potential To Emit (PTE)						
PM Total ⁽³⁾	0.21	---	0.21	0.91	---	0.91
PM10 ⁽³⁾	0.21	---	0.21	0.91	---	0.91
PM2.5 ⁽³⁾	0.21	---	0.21	0.91	---	0.91
SO _x	0.02	---	0.02	0.07	---	0.07
NO _x	2.74	---	2.74	12.01	---	12.01
VOC	0.15	31.65	31.80	0.66	138.64	139.30
CO	2.30	---	2.30	10.09	---	10.09
Total HAPs	0.05	11.53	11.58	0.23	50.51	50.74
Limited PTE ⁽⁴⁾						
PM Total ⁽³⁾	0.21	---	0.21	0.63	---	0.63
PM10 ⁽³⁾	0.21	---	0.21	0.63	---	0.63
PM2.5 ⁽³⁾	0.21	---	0.21	0.63	---	0.63
SO _x	0.02	---	0.02	0.05	---	0.05
NO _x	2.74	---	2.74	8.23	---	8.23
VOC	0.15	31.65	31.80	0.45	47.48	47.93
CO	2.30	---	2.30	6.91	---	6.91
Total HAPs	0.05	11.53	11.58	0.16	17.30	17.45

Notes:

See **Tables 3 - 6** for calculation details.

- (1) Total PTE includes worst case emissions for combustion units and spray line.
- (2) Paint System consists of one spray line and two booths.
- (3) PM Total assigned as all PM10 and PM2.5, conservative PM emission factor used.
- (4) Limited PTE Emission Estimates based on:
 - Combustion Units: Typ. Operating Conditions - 6,000 hours/yr (24 hr/day, 5 day/wk, 50 wk/yr)
 - Spray Booths: Estimated operating times based on meeting voluntary facility limits of
 VOCs: < 90 tpy, Federal HAPs: < 22.5 tpy, and Individual Federal HAPs: < 9 tpy.
 3,000 hours/yr (24 hr/day, 5 day/wk, 25 wk/yr)

Abbreviations:

PM - particulate matter	VOC - Volatile Organic Compounds
PM10 - particulate matter < 10 microns	CO - Carbon Monoxide
SO _x - Sulfur Oxides	HAPs - Hazardous Air Pollutants
NO _x - Nitrogen Oxides	tpy - tons per year



Table 3 - Combustion Units Estimated Criteria Pollutant Emissions (Natural Gas)

Pollutant	Emission Factor ⁽¹⁾ (lb/MMCF)	Combustion Units (ID / Description)									TOTAL Estimated Emissions (ton/yr)
		401 Billet Furnace (lb/hr) (ton/yr)	402 Aging Oven (lb/hr) (ton/yr)	403 Washer Tank Heater (lb/hr) (ton/yr)	404 Drying Oven (lb/hr) (ton/yr)	405 Baking Oven (lb/hr) (ton/yr)	406 Paint Room Heater (lb/hr) (ton/yr)	408 Hook Burn-Off Oven (lb/hr) (ton/yr)	409 Caustic Die Tank Heater (lb/hr) (ton/yr)		
Potential To Emit (PTE)											
Unit Heat Input Capacity (MMBTU/hr)		5.4	7	1.6	3	5	5.5	0.33	0.15		27.98
N.G. Fuel Heat Value (MMBTU/MMCF)		1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	---
Max. Potential Throughput (MMCF/hr)		0.0053	0.0069	0.0016	0.0029	0.0049	0.0054	0.0003	0.0001	0.0001	0.027
Max. Potential Throughput (MMCF/yr)		46	60	14	26	43	47	2.8	1.3	1.3	240
Max. Potential Hours of Operation (hr/yr)		8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	---
PM Total ⁽²⁾	7.6	0.18	0.23	0.05	0.10	0.16	0.18	0.01	0.005	0.001	0.91
PM10 ⁽²⁾	7.6	0.18	0.23	0.05	0.10	0.16	0.18	0.01	0.005	0.001	0.91
PM2.5 ⁽²⁾	7.6	0.18	0.23	0.05	0.10	0.16	0.18	0.01	0.005	0.001	0.91
SO_x	0.6	0.01	0.02	0.004	0.001	0.002	0.003	0.0002	0.0001	0.0001	0.07
NO_x	100	2.32	3.01	0.69	1.29	2.15	2.36	0.14	0.06	0.015	12.01
VOC	5.5	0.13	0.17	0.04	0.07	0.12	0.13	0.01	0.004	0.001	0.66
CO	84	1.95	2.52	0.58	1.08	1.80	1.98	0.12	0.05	0.012	10.09
Limited PTE (per Typical Plant Operations) ⁽³⁾											
Typical Throughput (MMCF/yr) ⁽³⁾		31.8	41.2	9.4	17.6	29.4	32.4	1.94	0.88	0.88	164.6
Typical Hours of Operation (hr/yr) ⁽³⁾		6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	---
PM Total ⁽²⁾	7.6	0.12	0.16	0.04	0.07	0.11	0.12	0.01	0.003	0.001	0.63
PM10 ⁽²⁾	7.6	0.12	0.16	0.04	0.07	0.11	0.12	0.01	0.003	0.001	0.63
PM2.5 ⁽²⁾	7.6	0.12	0.16	0.04	0.07	0.11	0.12	0.01	0.003	0.001	0.63
SO_x	0.6	0.01	0.01	0.004	0.001	0.002	0.003	0.0002	0.0001	0.0001	0.05
NO_x	100	1.59	2.06	0.69	1.29	2.15	2.36	0.14	0.06	0.015	8.23
VOC	5.5	0.09	0.11	0.03	0.05	0.08	0.09	0.01	0.002	0.001	0.45
CO	84	1.33	1.73	0.40	0.74	1.24	1.36	0.08	0.04	0.01	6.91

Notes: (1) Emission Factors from USEPA AP-42, Chapter 1.4, Tables 1.4-1 & 1.4-2.

(2) PM Total assigned as all PM10 and PM2.5, conservative PM emission factor used.

(3) Typical Operating Conditions for the facility: 24 hr/day, 5 day/wk, 50 wk/yr (totals 6,000 operating hours per year).

Abbreviations:

MMBTU - million British Thermal Units
 MMCF - million cubic feet
 PM - particulate matter
 PM10 - particulate matter < 10 microns
 SO_x - Sulfur Oxides
 NO_x - Nitrogen Oxides
 VOC - Volatile Organic Compounds
 CO - Carbon Monoxide
 HAPs - Hazardous Air Pollutants

Calculations:

Max. Potential Throughput (MMCF/yr) = (Heat Input Capacity (MMBTU/hr)) * (8,760 hr/yr) * (1 MMCF/1,020 MMBTU)
 PTE Estimated Emissions (lb/hr) = (Max. Pot. Hourly Throughput, MMCF/hr) * (Emission Factor, lb/MMCF)
 PTE Estimated Emissions (ton/yr) = (PTE Est. Emissions, lb/hr) * (Max. Pot. Hours of Operation, hr/yr) / (2000 lb/ton)
 Limited Hours of Operation (hr/yr) = (Limited Throughput, MMCF/yr) * (Fuel Heat Value, MMBTU/MMCF) / (Heat Input Cap, MMBTU/hr)
 Limited PTE Est. Emissions (lb/hr) = (Max. Pot. Hourly Throughput, MMCF/hr) * (Emission Factor, lb/MMCF)
 Limited PTE Est. Emissions (ton/yr) = (Limited PTE Est. Emissions, lb/hr) * (Limited Hours of Operation, hr/yr) / (2000 lb/ton)



Table 4 - Combustion Units Estimated HAPs Emissions (Natural Gas)

Hazardous Air Pollutant (HAP)	Emission Factor ⁽¹⁾ (lb/MMCF)	Combustion Units (ID / Description)								TOTAL Est. Emissions (ton/yr)
		401 Billet Furnace (ton/yr)	402 Aging Oven (ton/yr)	403 Wash Heater (ton/yr)	404 Drying Oven (ton/yr)	405 Baking Oven (ton/yr)	406 Paint Heater (ton/yr)	408 Burnoff Oven (ton/yr)	409 Caustic Heater (ton/yr)	
Potential To Emit (PTE)										
Unit Heat Input Capacity (MMBTU/hr)		5.4	7	1.6	3	5	5.5	0.33	0.15	27.98
N.G. Fuel Heat Value (MMBTU/MMCF)		1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	---
Max. Potential Throughput (MMCF/hr)		0.0053	0.0069	0.0016	0.0029	0.0049	0.0054	0.0003	0.0001	0.027
Max. Potential Throughput (MMCF/yr)		46	60	14	26	43	47	2.8	1.3	240
Max Hours of Operation (hr/yr)		8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	---
2-Methylnaphthalene	2.4E-05	5.57E-07	7.21E-07	1.65E-07	3.09E-07	5.15E-07	5.67E-07	3.40E-08	1.55E-08	2.88E-06
3-Methylcholanthrene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	3.71E-07	4.81E-07	1.10E-07	2.06E-07	3.44E-07	3.78E-07	2.27E-08	1.03E-08	1.92E-06
Acenaphthene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Acenaphthylene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Anthracene	2.4E-06	5.57E-08	7.21E-08	1.65E-08	3.09E-08	5.15E-08	5.67E-08	3.40E-09	1.55E-09	2.88E-07
Arsenic	2.0E-04	4.64E-06	6.01E-06	1.37E-06	2.58E-06	4.29E-06	4.72E-06	2.83E-07	1.29E-07	2.40E-05
Benz(a)anthracene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Benzene	2.1E-03	4.87E-05	6.31E-05	1.44E-05	2.71E-05	4.51E-05	4.96E-05	2.98E-06	1.35E-06	2.52E-04
Benzo(a)pyrene	1.2E-06	2.78E-08	3.61E-08	8.24E-09	1.55E-08	2.58E-08	2.83E-08	1.70E-09	7.73E-10	1.44E-07
Benzo(b)fluoranthene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Benzo(g,h,i)perylene	1.2E-06	2.78E-08	3.61E-08	8.24E-09	1.55E-08	2.58E-08	2.83E-08	1.70E-09	7.73E-10	1.44E-07
Benzo(k)fluoranthene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Beryllium	1.2E-05	2.78E-07	3.61E-07	8.24E-08	1.55E-07	2.58E-07	2.83E-07	1.70E-08	7.73E-09	1.44E-06
Cadmium	1.1E-03	2.55E-05	3.31E-05	7.56E-06	1.42E-05	2.36E-05	2.60E-05	1.56E-06	7.09E-07	1.32E-04
Chromium	1.4E-03	3.25E-05	4.21E-05	9.62E-06	1.80E-05	3.01E-05	3.31E-05	1.98E-06	9.02E-07	1.68E-04
Chrysene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Cobalt	8.4E-05	1.95E-06	2.52E-06	5.77E-07	1.08E-06	1.80E-06	1.98E-06	1.19E-07	5.41E-08	1.01E-05
Dibenzo(a,h)anthracene	1.2E-06	2.78E-08	3.61E-08	8.24E-09	1.55E-08	2.58E-08	2.83E-08	1.70E-09	7.73E-10	1.44E-07
Dichlorobenzene	1.2E-03	2.78E-05	3.61E-05	8.24E-06	1.55E-05	2.58E-05	2.83E-05	1.70E-06	7.73E-07	1.44E-04
Fluoranthene	3.0E-06	6.96E-08	9.02E-08	2.06E-08	3.86E-08	6.44E-08	7.09E-08	4.25E-09	1.93E-09	3.60E-07
Fluorene	2.8E-06	6.49E-08	8.42E-08	1.92E-08	3.61E-08	6.01E-08	6.61E-08	3.97E-09	1.80E-09	3.36E-07
Formaldehyde	7.5E-02	1.74E-03	2.25E-03	5.15E-04	9.66E-04	1.61E-03	1.77E-03	1.06E-04	4.83E-05	9.01E-03
Hexane	1.8E+00	4.17E-02	5.41E-02	1.24E-02	2.32E-02	3.86E-02	4.25E-02	2.55E-03	1.16E-03	2.16E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	4.17E-08	5.41E-08	1.24E-08	2.32E-08	3.86E-08	4.25E-08	2.55E-09	1.16E-09	2.16E-07
Manganese	3.8E-04	8.81E-06	1.14E-05	2.61E-06	4.90E-06	8.16E-06	8.97E-06	5.38E-07	2.45E-07	4.57E-05
Mercury	2.6E-04	6.03E-06	7.82E-06	1.79E-06	3.35E-06	5.58E-06	6.14E-06	3.68E-07	1.67E-07	3.12E-05
Naphthalene	6.1E-04	1.41E-05	1.83E-05	4.19E-06	7.86E-06	1.31E-05	1.44E-05	8.64E-07	3.93E-07	7.33E-05
Nickel	2.1E-03	4.87E-05	6.31E-05	1.44E-05	2.71E-05	4.51E-05	4.96E-05	2.98E-06	1.35E-06	2.52E-04
Phenanthrene	1.7E-05	3.94E-07	5.11E-07	1.17E-07	2.19E-07	3.65E-07	4.02E-07	2.41E-08	1.10E-08	2.04E-06
Pyrene	5.0E-06	1.16E-07	1.50E-07	3.44E-08	6.44E-08	1.07E-07	1.18E-07	7.09E-09	3.22E-09	6.01E-07
Selenium	2.4E-05	5.57E-07	7.21E-07	1.65E-07	3.09E-07	5.15E-07	5.67E-07	3.40E-08	1.55E-08	2.88E-06
Toluene	3.4E-03	7.88E-05	1.02E-04	2.34E-05	4.38E-05	7.30E-05	8.03E-05	4.82E-06	2.19E-06	4.09E-04
TOTAL PTE HAPs (ton/yr):										0.23
Hazardous Air Pollutant (HAP)	Emission Factor ⁽¹⁾	Combustion Units (ID / Description)								TOTAL Est. Emissions
		401 Billet Furnace	402 Aging Oven	403 Wash Heater	404 Drying Oven	405 Baking Oven	406 Paint Heater	408 Burnoff Oven	409 Caustic Heater	



Table 4 - Combustion Units Estimated HAPs Emissions (Natural Gas)

	(lb/MMCF)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
Limited PTE ⁽²⁾										
Typical Throughput (MMCF/yr) ⁽²⁾		31.8	41.2	9.4	17.6	29.4	32.4	1.94	0.88	164.6
Typical Hours of Operation (hr/yr) ⁽²⁾		6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	---
2-Methylnaphthalene	2.4E-05	3.81E-07	4.94E-07	1.13E-07	2.12E-07	3.53E-07	3.88E-07	2.33E-08	1.06E-08	1.98E-06
3-Methylcholanthrene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	2.54E-07	3.29E-07	7.53E-08	1.41E-07	2.35E-07	2.59E-07	1.55E-08	7.06E-09	1.32E-06
Acenaphthene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Acenaphthylene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Anthracene	2.4E-06	3.81E-08	4.94E-08	1.13E-08	2.12E-08	3.53E-08	3.88E-08	2.33E-09	1.06E-09	1.98E-07
Arsenic	2.0E-04	3.18E-06	4.12E-06	9.41E-07	1.76E-06	2.94E-06	3.24E-06	1.94E-07	8.82E-08	1.65E-05
Benz(a)anthracene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Benzene	2.1E-03	3.34E-05	4.32E-05	9.88E-06	1.85E-05	3.09E-05	3.40E-05	2.04E-06	9.26E-07	1.73E-04
Benzo(a)pyrene	1.2E-06	1.91E-08	2.47E-08	5.65E-09	1.06E-08	1.76E-08	1.94E-08	1.16E-09	5.29E-10	9.88E-08
Benzo(b)fluoranthene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Benzo(g,h,i)perylene	1.2E-06	1.91E-08	2.47E-08	5.65E-09	1.06E-08	1.76E-08	1.94E-08	1.16E-09	5.29E-10	9.88E-08
Benzo(k)fluoranthene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Beryllium	1.2E-05	1.91E-07	2.47E-07	5.65E-08	1.06E-07	1.76E-07	1.94E-07	1.16E-08	5.29E-09	9.88E-07
Cadmium	1.1E-03	1.75E-05	2.26E-05	5.18E-06	9.71E-06	1.62E-05	1.78E-05	1.07E-06	4.85E-07	9.05E-05
Chromium	1.4E-03	2.22E-05	2.88E-05	6.59E-06	1.24E-05	2.06E-05	2.26E-05	1.36E-06	6.18E-07	1.15E-04
Chrysene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Cobalt	8.4E-05	1.33E-06	1.73E-06	3.95E-07	7.41E-07	1.24E-06	1.36E-06	8.15E-08	3.71E-08	6.91E-06
Dibenzo(a,h)anthracene	1.2E-06	1.91E-08	2.47E-08	5.65E-09	1.06E-08	1.76E-08	1.94E-08	1.16E-09	5.29E-10	9.88E-08
Dichlorobenzene	1.2E-03	1.91E-05	2.47E-05	5.65E-06	1.06E-05	1.76E-05	1.94E-05	1.16E-06	5.29E-07	9.88E-05
Fluoranthene	3.0E-06	4.76E-08	6.18E-08	1.41E-08	2.65E-08	4.41E-08	4.85E-08	2.91E-09	1.32E-09	2.47E-07
Fluorene	2.8E-06	4.45E-08	5.76E-08	1.32E-08	2.47E-08	4.12E-08	4.53E-08	2.72E-09	1.24E-09	2.30E-07
Formaldehyde	7.5E-02	1.19E-03	1.54E-03	3.53E-04	6.62E-04	1.10E-03	1.21E-03	7.28E-05	3.31E-05	6.17E-03
Hexane	1.8E+00	2.86E-02	3.71E-02	8.47E-03	1.59E-02	2.65E-02	2.91E-02	1.75E-03	7.94E-04	1.48E-01
Indeno(1,2,3-cd)pyrene	1.8E-06	2.86E-08	3.71E-08	8.47E-09	1.59E-08	2.65E-08	2.91E-08	1.75E-09	7.94E-10	1.48E-07
Manganese	3.8E-04	6.04E-06	7.82E-06	1.79E-06	3.35E-06	5.59E-06	6.15E-06	3.69E-07	1.68E-07	3.13E-05
Mercury	2.6E-04	4.13E-06	5.35E-06	1.22E-06	2.29E-06	3.82E-06	4.21E-06	2.52E-07	1.15E-07	2.14E-05
Naphthalene	6.1E-04	9.69E-06	1.26E-05	2.87E-06	5.38E-06	8.97E-06	9.87E-06	5.92E-07	2.69E-07	5.02E-05
Nickel	2.1E-03	3.34E-05	4.32E-05	9.88E-06	1.85E-05	3.09E-05	3.40E-05	2.04E-06	9.26E-07	1.73E-04
Phenanthrene	1.7E-05	2.70E-07	3.50E-07	8.00E-08	1.50E-07	2.50E-07	2.75E-07	1.65E-08	7.50E-09	1.40E-06
Pyrene	5.0E-06	7.94E-08	1.03E-07	2.35E-08	4.41E-08	7.35E-08	8.09E-08	4.85E-09	2.21E-09	4.11E-07
Selenium	2.4E-05	3.81E-07	4.94E-07	1.13E-07	2.12E-07	3.53E-07	3.88E-07	2.33E-08	1.06E-08	1.98E-06
Toluene	3.4E-03	5.40E-05	7.00E-05	1.60E-05	3.00E-05	5.00E-05	5.50E-05	3.30E-06	1.50E-06	2.80E-04
TOTAL Limited PTE HAPs (ton/yr):										0.16

Notes: (1) Emission Factors from USEPA AP-42, Chapter 1.4 (July 1998), Tables 1.4-3 & 1.4-4.
 (2) Typical Operating Conditions for the facility: 24 hr/day, 5 day/wk, 50 wk/yr (totals 6,000 operating hours per year).

Abbreviations: MMCF - million cubic feet HAPs - Hazardous Air Pollutants

Calculations:
 Max. Potential Throughput (MMCF/hr) = (Unit Heat Input Capacity, MMBTU/hr) / (1,020 MMBTU/MMCF)
 Max. Potential Throughput (MMCF/yr) = (Max. Potential Throughput, MMCF/hr) * (Max. Hours of Operation, hr/yr)
 PTE Estimated Emissions (ton/yr) = (Max. Potential Throughput, MMCF/yr) * (E.F., lb/MMCF) / (2000 lb/ton)
 Typical Throughput, MMCF/yr = (Max. Potential Throughput, MMCF/hr) * (Typical Hours of Operation, hr/yr) / (Max. Hours of Operation, hr/yr)
 Limited PTE Est. Emissions (ton/yr) = (Typical Throughput, MMCF/yr) * (E.F., lb/MMCF) / (2000 lb/ton)



Table 5 - Spray Booths Estimated VOCs and HAPs Emissions

Hazardous Air Pollutant (HAP)	411 - Paint Line (Spray Booths) Estimated Emissions ⁽¹⁾																						Solvent Lacquers (lb/hr)	TOTAL Est. Emissions (ton/yr)
	123289 (lb/hr) (ton/yr)	114977 (lb/hr) (ton/yr)	123585 (lb/hr) (ton/yr)	108778 (lb/hr) (ton/yr)	75141 (lb/hr) (ton/yr)	123586 (lb/hr) (ton/yr)	108777 (lb/hr) (ton/yr)	139940 (lb/hr) (ton/yr)	134522 (lb/hr) (ton/yr)	75536 (lb/hr) (ton/yr)	PMW10112 (lb/hr) (ton/yr)	221W-2347LH (lb/hr) (ton/yr)	134635 (lb/hr) (ton/yr)	135409 (lb/hr) (ton/yr)	123286 (lb/hr) (ton/yr)	118037 (lb/hr) (ton/yr)	98294 (lb/hr) (ton/yr)	91571 (lb/hr) (ton/yr)	74728 (lb/hr) (ton/yr)	74882 (lb/hr) (ton/yr)	85318 (lb/hr) (ton/yr)	92862 (lb/hr) (ton/yr)		
Spray System Details																								
Max. Throughput	0.03	0.02	0.41	0.10	0.06	0.40	0.94	0.21	0.04	0.05	0.87	0.49	0.61	2.41	0.05	0.27	0.96	0.15	0.08	0.67	1.18	0.10	1.0	11.10
Max. Throughput (gal/yr) ⁽³⁾	224	192	3,617	832	512	3,489	8,227	1,825	384	448	7,650	4,289	5,378	21,127	416	2,401	8,419	1,280	672	5,890	10,339	864	8,760	97,236
Max. Hours of Operation (hr/yr)	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	---
Paint Component Concentrations:⁽⁴⁾																								
VOC (lb/gal)	2.47	2.49	2.33	2.34	2.40	2.48	2.5	2.27	2.58	2.53	2.61	2.9	2.46	2.6	2.48	2.55	2.97	2.39	2.54	2.84	2.56	2.46	5.29	
Glycol Ether (lb/gal)	0.313	0.3866	0.369	0.3631	0.3649	0.3741	0.284	0.325	0.373	0	0	0.301	0.368	0.292	0.315	0.308	0.356	0	0.315	0.3254	0.304	0	0	
Xylene (lb/gal)	0.761	0.453	0.503	0.5758	0.5676	0.572	0.907	0.61	0.504	0.495	0	0.087	0.817	0.512	0.855	0.672	0.529	0.574	0.431	0.667	0	0.825	0	
Toluene (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.187	0	0	0	0	0	1.4175	
Naphthalene (lb/gal)	0.032	0.0499	0.0401	0.0402	0.0412	0.0464	0.024	0.03	0.046	0.097	0.03	0	0.028	0.046	0.027	0.035	0.039	0.039	0.103	0.04	0.0574	0.028	0	
Ethylbenzene (lb/gal)	0.137	0.084	0.092	0.1041	0.104	0.105	0.162	0.11	0.093	0.091	0.03	0.009	0.147	0.094	0.153	0.122	0.097	0.105	0.079	0.121	0	0.148	0	
Cumene (lb/gal)	0	0	0	0	0	0	0	0	0	0	0.04	0.017	0	0	0	0	0.01	0	0	0	0	0	0	
Methanol (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4058	
Antimony (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0548	0.547	0	0	0	0	0	0	
Chromium (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0219	0.547	0	0	0	0	0	0	0	
Cobalt (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hexane (lb/gal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2877	
Total HAPs (lb/gal)	1.2314	0.9615	1.0041	1.0832	1.0777	1.0975	1.377	1.075	1.016	0.683	0.1	0.113	1.293	1.02	1.4037	2.238	1.17	1.074	0.613	1.143	0.3828	1.305	2.111	
Potential To Emit (PTE)⁽⁵⁾																								
VOC	0.06	0.05	0.96	0.22	0.14	0.99	2.35	0.47	0.11	0.13	2.28	1.42	1.51	6.27	0.12	0.70	2.85	0.35	0.19	1.91	3.02	0.24	5.29	31.65
Glycol Ether	0.01	0.01	0.15	0.03	0.02	0.15	0.27	0.07	0.02	0.00	0.00	0.00	0.18	0.89	0.01	0.09	0.30	0.05	0.00	0.21	0.38	0.03	0.00	2.87
Xylene	0.02	0.01	0.21	0.05	0.03	0.23	0.85	0.13	0.02	0.03	0.00	0.00	0.50	1.23	0.04	0.18	0.51	0.08	0.03	0.45	0.00	0.08	0.00	4.74
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	1.60
Naphthalene	0.001	0.001	0.017	0.004	0.002	0.02	0.02	0.03	0.002	0.005	0.03	0.00	0.00	0.11	0.001	0.01	0.04	0.01	0.01	0.03	0.07	0.003	0.00	7.00
Ethylbenzene	0.004	0.005	0.073	0.017	0.011	0.08	0.10	0.03	0.01	0.02	0.11	0.00	0.08	0.49	0.01	0.04	0.16	0.02	0.03	0.12	0.30	0.01	0.00	1.72
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Antimony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
Chromium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.67
Cobalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hexane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Total HAPs	0.03	0.02	0.41	0.10	0.06	0.44	1.29	0.22	0.04	0.03	0.15	0.09	0.38	0.24	0.07	0.61	1.12	0.69	0.21	0.77	0.45	0.13	2.11	11.53
Limited PTE⁽⁶⁾																								
Limited Hours of Operation (hr/yr)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	---
Limited Throughput (gal/yr) ⁽²⁾	77	66	1,239	285	175	1,195	2,817	625	132	153	2,620	1,469	1,842	7,235	143	822	2,883	438	230	2,017	3,541	296	3,000	33,300
VOC	0.06	0.05	0.96	0.22	0.14	0.99	2.35	0.47	0.11	0.13	2.28	1.42	1.51	6.27	0.12	0.70	2.85	0.35	0.19	1.91	3.02	0.24	5.29	31.65
Glycol Ether	0.01	0.01	0.15	0.03	0.02	0.15	0.27	0.07	0.02	0.00	0.00	0.00	0.18	0.89	0.01	0.09	0.30	0.05	0.00	0.21	0.38	0.03	0.00	2.87
Xylene	0.02	0.01	0.21	0.05	0.03	0.23	0.85	0.13	0.02	0.03	0.00	0.00	0.50	1.23	0.04	0.18	0.51	0.08	0.03	0.45	0.00	0.08	0.00	4.74
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	1.60
Naphthalene	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.03	0.01	0.00	0.00	0.00	0.02	0.11	0.00	0.01	0.04	0.01	0.01	0.03	0.07	0.003	0.00	3.99
Ethylbenzene	0.00	0.00	0.04	0.01	0.01	0.04	0.15	0.02	0.00	0.01	0.03	0.00	0.09	0.23	0.01	0.03	0.15	0.09	0.02	0.01	0.03	0.00	0.00	0.88
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Antimony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
Chromium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.67
Cobalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hexane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Total HAPs	0.03	0.02	0.41	0.10	0.06	0.44	1.29	0.22	0.04	0.03	0.15	0.09	0.38	0.24	0.07	0.61	1.12	0.69	0.21	0.77	0.45	0.13	2.11	11.53
Estimated Actual Annual Emissions (2022 Data, Spray Line (411))⁽⁷⁾																								
VOC	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.65
Total HAPs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.18

Notes: Paint System consists of one spray line and two booths. MI Metals continuous tracks spray usage and emissions.

Abbreviations: VOC - Volatile Organic Compounds, MIBK - Methyl Isobutyl Ketone, HAPs - Hazardous Air Pollutants

(1) Emissions estimated from ALL of the process paints and lacquer (cleaning) (see Table 8 - 2022 Usage Summary).

(2) Maximum spray line throughput is 11.1 gal/hr, weighted average for paints and solvent lacquer (@ approx. 1.0 gal/hr for cleaning) applied (see Table 6 (Spray Calculations), & Table 8 (2022 Usage Summary)).

(3) Max. spray line throughput (gal/yr) based on continuous spray operations (8,760 hr/yr).

(4) Component concentrations from Environmental Data Sheets for the respective sprays.

(5) PTE estimated based on worst case scenario, non-stop continuous use (8,760 hr/yr).

(6) Limited PTE estimated based on meeting voluntary facility limits of VOCs < 90 tpy, Federal HAPs: < 22.5 tpy, and Individual HAPs: < 9 tpy (ea.). 24 hr/day, 5 day/wk, 25 wk/yr (totals 3,000 operating hours per year)

(7) Paint Line Estimated Actual Annual Emissions from 2022 year totals (see Table 8).

Calculations:

PTE Estimated (Max. Throughput, gal/hr) * (Paint Component Concentration, lb/gal)

PTE Estimated (PTE Est. Emission, lb/hr) * (Max. Hours of Operation, hr/yr) / (2000 lb/ton)

Limited PTE Is (Max. Throughput, gal/hr) * (Paint Component Concentration, lb/gal)

Limited PTE Is (Limited PTE Est. Emission, lb/hr) * (Limited Hours of Operation, hr/yr) / (2000 lb/ton)



Table 6 - Spray Usage Determination (based on 2022 data)

Process Material #	Spray Content		Amount Used in 2022 ⁽¹⁾ (gal/yr)	Fractional Use ⁽²⁾	Estimated Hourly Use ⁽³⁾ (gal/hr)
	VOCs (lb/gal)	HAPs, Total (lb/gal)			
ALL Used Sprays (2017)					
92862	2.41	1.2899	27	0.010	0.10
85318	2.56	0.383	323	0.117	1.18
74882	2.84	1.143	184	0.067	0.67
74728	2.54	0.613	21	0.008	0.08
91571	2.39	1.073	40	0.014	0.15
98294	2.97	1.170	263	0.095	0.96
118037	2.55	2.238	75	0.027	0.27
123286	2.48	1.327	13	0.005	0.05
135409	2.60	1.020	660	0.239	2.41
134635	2.46	1.292	168	0.061	0.61
221W-2347LH	2.90	0.811	134	0.048	0.49
PMW10112	2.61	0.126	239	0.086	0.87
75536	2.53	0.683	14	0.005	0.05
134522	2.58	1.017	12	0.004	0.04
139940	2.27	1.075	57	0.021	0.21
108777	2.50	1.377	257	0.093	0.94
123586	2.48	1.097	109	0.039	0.40
75141	2.36	1.0765	16	0.006	0.06
108778	2.34	1.0832	26	0.009	0.10
123585	2.33	1.004	113	0.041	0.41
114977	2.49	0.974	6	0.002	0.02
123289	2.47	1.244	7	0.003	0.03
Totals:			2,764	1.00	10.10
Cleaning Agent Used (2022)					
Solvent Lacquer	5.29	2.111	497	---	1.00
Total Sprays Used for Estimated Emissions (Table 5):					11.10
Total Spray Paints Used (2022):			2,764		
Total Solvent Used (2022):			497		

Notes:

- (1) See **Table 9**.
- (2) Fraction use of each used sprays.
Calculated by: (Fractional Use) = (Amt. used in 2022) / (Total of ALL Sprays used in 2022)
- (3) Estimated Hourly Use based on max. spray line throughput of 11.1 gal/hr and approx. solvent use of 1.0 gal/hr (thus 10.1 gal/hr max. of paints).
Calculated by: (Estimated Hourly Use) = (Spray Fractional Use) * (10.1 gal/hr)



Table 7 - Greenhouse Gas (GHG) Estimated Emissions (Natural Gas Combustion)

Equip. ID Number	Type of Equipment	Max. Rated Capacity MMBTU/hr	Carbon Dioxide (CO ₂) ⁽¹⁾		Methane (CH ₄) ⁽¹⁾		Nitrous Oxide (N ₂ O) ⁽¹⁾	
			E.F. (lb/MMBTU)	Est. Emissions (ton/yr)	E.F. (lb/MMBTU)	Est. Emissions (ton/yr)	E.F. (lb/MMBTU)	Est. Emissions (ton/yr)
401	Billet Furnace	5.4	117.65	1,906	0.0023	0.0365	0.0022	0.0349
402	Aging Oven	7	117.65	2,471	0.0023	0.0474	0.0022	0.0453
403	Washer Tank Heater	1.6	117.65	565	0.0023	0.0108	0.0022	0.0104
404	Drying Oven	3	117.65	1,059	0.0023	0.0203	0.0022	0.0194
405	Baking Oven	5	117.65	1,765	0.0023	0.0338	0.0022	0.0324
406	Paint Room Heater	5.5	117.65	1,941	0.0023	0.0372	0.0022	0.0356
408	Hook Burn-Off Oven	0.33	117.65	116	0.0023	0.0022	0.0022	0.0021
409	Caustic Die Tank Heater	0.15	117.65	53	0.0023	0.0010	0.0022	0.0010
Totals (ton/yr):				9,875	0.1893		0.1810	
Totals (lb/hr):				3,292	0.0631		0.0603	
Total Estimated GHG Emissions (ton/yr):					9,876			

Notes: Based on typical annual operating hours of: 6,000 hr/yr
 (1) GHGs formed during natural gas combustion (CO₂, CH₄, and N₂O).
 (2) Emission Factors from USEPA AP-42, Chapter 1.4, Table 1.4-2.
Estimated Emissions (ton/yr) calculated by:
 (Estimated Emissions, ton/yr) = (Max. Rated Capacity, MMBTU/hr) * (Operating Hours, hr/yr) * (E.F., lb/MMBTU) / (2000, lb/ton)



Table 8 - MI Metals 2022 Spray Usage Summary

Process Materials Paint/Solvent	VOC Content lb/gal	Total HAP lb/gal	GALLONS Months												TOTAL gal/yr	VOC ton/yr	HAP ton/yr	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
92862	2.41	1.2899								27						27	0.03	0.02
85318	2.56	0.383	26	33	79	18	17	8	33	20	89					323	0.41	0.06
74882	2.84	1.143	8	16	8	43		19	6	6	4		33	41	184	0.26	0.11	
74728	2.54	0.613				14					7				21	0.03	0.01	
91571	2.39	1.073		11	4	19				6					40	0.05	0.02	
98294	2.97	1.170	6		10	20	39		6	12	75	72	23	263	0.39	0.15		
118037	2.55	2.238	22	2	40			5	2	4				75	0.10	0.08		
123286	2.48	1.327	9							4				13	0.02	0.01		
135409	2.60	1.020	56	89	77	64	44	111	40	86	20	13	41	19	660	0.86	0.34	
134635	2.46	1.292	17		14	29	17	10		48	12	14	7	168	0.21	0.11		
221W-2347LH	2.90	0.811	47	19				6	33	29				134	0.19	0.05		
PMW10112	2.61	0.126		19		14	67	35		17	50	13	24	239	0.31	0.02		
75536	2.53	0.683					14							14	0.02	0.00		
134522	2.58	1.017							6	6				12	0.02	0.01		
139940	2.27	1.075				57								57	0.06	0.03		
108777	2.50	1.377		37	72		28	25		29	7	35	24	257	0.32	0.18		
123586	2.48	1.097		18		27	6		14	12	7	21	4	109	0.14	0.06		
75141	2.36	1.0765							12		4			16	0.02	0.01		
108778	2.34	1.0832				26								26	0.03	0.01		
123585	2.33	1.004			9	9	21		8	8	12	9	37	113	0.13	0.06		
114977	2.49	0.974								6				6	0.01	0.00		
123289	2.47	1.244	7											7	0.01	0.00		
Cleaning Agent Used (Solvent Lacquer)																		
AG Layne A1 Thinner	5.29	2.111	39	31	63	65	40	38	52	31	43	30	37	28	497	1.31	0.52	

TOTAL => 4.92 1.86



Table 9 - Insignificant Activities List

No.	Activity
IA-1	Housekeeping activities and associated products used for cleaning purposes, including collected spilled and accumulated materials at the source.
IA-2	General office activities, such as paper shredding and copying but not to include incineration.
IA-3	Restroom facilities and associated cleanup operations and stacks or vents to prevent escape of sewer gases through plumbing traps.
IA-4	User of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 U.S.C. 1261 et. seq.) where the product is used at the source in the same manner as normal consumer use.
IA-5	Building maintenance and janitorial activities.
IA-6	Storage and piping of natural gas.
IA-7	Storage tanks of any size containing exclusively soaps, detergents, waxes, greases, aqueous caustic solutions, or aqueous salt solutions.
IA-8	Safety devices such as fire extinguishers.

Citation & Description of Applicable Requirements

Citation	Description of Applicable Requirements
ARS49-426.F, ACC.R18-2-304.C.2, -306.A1	Permit expiration & renewal
AAC.R18-2-306.A.a, -306.A.8.b	Compliance with permit conditions
AAC.R18-2-306.A.8.c, -321.A.1.c-d, -321.A.2	Permit revision, reopening, revocation & reissuance or termination for cause
AAC.R18-2-315	Posting of permit
AAC.R18-2-306.A.9, -326	Fee payment
AAC.R18-2-327.A, -327.B	Annual emission inventory questionnaire
AAC.R18-2-309.2.a., -309.2.c, -309.2.d, -309.5.d	Compliance certification
AAC.R18-2-304.H	Certification of truth, accuracy & completeness
AAC.R18-2-309.4	Inspection & entry
AAC.R18-2-304.C	Permit revision pursuant to federal hazardous air pollutant standard
40 CFR Part 68	Accidental release program
AAC.R18-2-310.01.A, -310.01.B, -310.01.C	Excess emissions reporting
AAC.R18-2-306.A.5.b	Permit deviations reporting
AAC.R18-2-306.E	Emergency provision
ARS49-426.I.5	Compliance schedule
AAC.R18-2-310	Affirmative defense fro excess emissions due to malfunctions, startup & shutdown
AAC.R18-2-306.A.4	Record keeping requirements
AAC.R18-2-306.A.5.a	Reporting requirements
AAC.R18-2-304.G, -306.A.8.e	Duty to provide information
AAC.R18-2-317.01, -318, -319, -320	Permit amendment or revision
AAC.R18-2-306.A.4, -317.02	Facility change without a permit revision
AAC.R18-2-306.A.4	Logging requirements
AAC.R18-2-312	Testing requirements
AAC.R18-2-306.A.8.d	Property rights
AAC.R18-2-306.A.7	Severability clause
AAC.R18-2-325	Permit shield
AAC.R18-2-306.A.3.c, -306.01, -331.A.3.a, -306.A.3.c, 306.A.5.b	Facility wide requirements
AAC.R18-2-306.A.2	Fuel limitation
AAC.R18-2-702.B, -730.A.1, -306.A.3.c	Fuel burning - opacity & particulate matter
AAC.R18-2-730.F, -730.G	Fuel burning - VOC limitation
AAC.R18-2-306.A.2, -331.A.3.e	Fuel burning -air pollution control
AAC.R18-2-325	Fuel burning - permit shield
AAC.R18-2-702.B, -306.A.2, -331.A.3.e, -306.A.3.c, -325	Spray paint - opacity
AAC.R18-2-727.A, -727.B, -727.C, -727.D, -306.A.4, -727.A, -325, SIP Provision R9-3-527.C	Spray paint - VOCs
AAC.R18-2-730.D, -730.F, -730.G, -730.L, -306.A.3.c, -325	Miscellaneous activities - VOCs
AAC.R18-2-730.A.1, -730.B, -306.A.3.c, -325	Miscellaneous activities - opacity & particulate matter