



**Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit**

Review Report

Western Pneumatics LLC

110 North Seneca Road

Eugene, OR 97402

Website: <http://westernpneumatics.com/>

Permit No. 208929

Source Information:

Primary SIC	3564 – Blowers and Fans
Secondary SIC	--
Primary NAICS	333413 – Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing
Secondary NAICS	--
Source Categories (LRAPA title 37, Table 1)	B.69 Surface Coating Operations: coating operations whose actual or

	expected usage of coating materials is greater than 250 gallons per month, excluding sources that exclusively use non-VOC and non-HAP containing coatings
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	N
Emission Credits	N
Compliance Schedule	N
Source Test [date(s)]	N

COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	February 15
Semi-Annual Report (due date)	August 15
GHG Report (due date)	N
Monthly Report (due date)	N

Quarterly Report (due date)	N
Excess Emissions Report	Y
Other Reports (due date)	N

Air Programs

NSPS (list subparts)	--
NESHAP (list subparts)	--
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	Y
SM-80	N
Title V	N
Part 68 Risk Management	N
ACDP (SIP)	N
Major FHAP Source	N
Federal Major Source	N
NA New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N

>20 Megawatts	N
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Permittee Identification

1. Western Pneumatics LLC (“the facility” or “WP”) operates a dust collection and air cleaning equipment manufacturing facility at 110 North Seneca Road, Eugene, Oregon.

Reasons for Permit Action and Fee Basis

2. The facility operates a process listed in LRAPA title 37, Table 1, Part B (B.69, Surface coating operations: coating operations whose actual or expected usage of coating materials is greater than 250 gallons per month, excluding sources that exclusively use non-VOC and non-HAP containing coatings) and is, therefore, required to obtain an air contaminant discharge permit. The current Standard ACDP for the facility expires on December 8, 2022. The facility submitted a renewal application on June 2, 2022. Because the facility submitted a timely renewal application at least 180 days prior to the expiration of the Standard ACDP, they are authorized to continue operating until the Standard ACDP is renewed. The renewed Standard ACDP will be valid for up to five (5) years.
3. The Standard ACDP renewal also includes a non-PSD/NSR simple technical permit modification (TPM) to establish a PSEL for NO_x emissions. As part of the renewal, LRAPA recognized that emission units EU-2 and EU-3 have potential NO_x emissions exceeding the de minimis threshold in Title 12 of one (1) ton per year. Monitoring and recordkeeping will be added to the proposed permit to demonstrate compliance with the new NO_x PSEL.

Attainment Status

4. The facility is located inside the Eugene-Springfield Air Quality Management Area. The facility is located in an area that has been designated attainment/unclassified for PM_{2.5}, ozone (VOC), NO₂, SO₂, and Pb and a maintenance area for CO and PM₁₀. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.

Permitting History

5. LRAPA has reviewed and issued the following permitting actions to this facility:

Date Approved/Valid	Permit Action Type	Description
04/14/2000-04/13/2005	ACDP	Initial issuance
04/14/2005-04/13/2010	SM ACDP	Renewal
Unknown	NC-208929-A08	Add sandblasting baghouse
05/12/2009	ACDP	Change permit type and fee basis
11/22/2010-11/22/2015	ACDP	Renewal
09/17/2012	ACDP Addendum No. 1	Add 40 CFR 63 subpart 6X requirements
06/18/2013	NC-208929-A13	Add plasma cutter cartridge filter
07/23/2013	ACDP Addendum No. 2	Add plasma cutter cartridge filter
12/08/2017-12/08/2022	ACDP	Renewal
01/27/2020	ACDP Addendum No. 1	Remove 40 CFR 63 subpart 6X requirements
04/16/2021	ACDP Addendum No. 2	Change in facility name
Upon Issuance	ACDP	Renewal and Simple TPM

Emission Unit Descriptions

6. The emission units regulated by the permit are the following:

EU ID	Emission Unit Description	PCD ID	Pollution Control Device Description
Significant Emission Units			
EU-1	Spray Booth	DF-1	Dry Filters
EU-2	Laser Cutter	BH-1	Cartridge Filter
EU-3	Plasma Cutter	BH-2	Baghouse
Aggregate Insignificant Emissions			
EU-4	Blast Room	BH-3	Baghouse
EU-5	Welding Operations	--	--

7. EU-1: Spray Booth
 The facility has one (1) spray booth used to spray coat metal products. The facility uses high transfer efficiency spray guns such as high volume low pressure (HVLP), airless, or air assisted airless (AAA) to apply coatings. The assumed transfer efficiency is at least 60%. The facility uses dry filters to control overspray particulate matter. These dry filters have a removal efficiency of greater than 98%. Actual 2020 usage was scaled up by a factor of three (3) to represent potential emissions.

8. EU-2: Laser Cutter and EU-3: Plasma Cutter
 The facility currently uses two types of processes to cut metal sheets to the desired shape and size. The emissions from these processes are based on "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel" by Bromsen B. et al. (1994). The particulate matter emissions from these processes are controlled by a baghouse or cartridge filter with an assumed removal efficiency of at least 99%.

9. EU-4: Blast Room
 The facility conducts sand blasting of metal in a blast room. The sand blast media used does not contain respirable silica. Sand blast emission factors are based on information from the San Diego Air Pollution Control District. The particulate matter emissions from this process are controlled by a baghouse with an assumed removal efficiency of at least 99.9%.

10. EU-5: Welding Operations
 The facility conducts GMAW and FCAW welding operations. Welding emission factors are derived from US EPA AP-42 – Chapter 12.19 based on the welding wire/rod consumed. Actual 2020 usage was scaled up by a factor of three (3) to represent potential emissions.

General Emission Limitations

11. The facility is subject to the general requirements for fugitive emissions under LRAPA 48-015. Fugitive emissions are defined as visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under LRAPA 48-015(1)(a)-(g). When fugitive emissions occur at a facility, LRAPA may order the facility to abate the emissions. If requested by LRAPA, the facility must develop a Fugitive Emission Control Plan. Compliance will be demonstrated through weekly monitoring of fugitive emissions.

12. Emission Units EU-1 through EU-5 are subject to the visible emission limitations under LRAPA 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. Compliance will be demonstrated through quarterly monitoring of visible emissions.

13. Emission Units EU-1 through EU-5 are subject to the particulate matter emission limitations under LRAPA 32-015(2). For sources installed, constructed, or modified on or after June 1, 1970 but prior

to April 16, 2015 for which there are not representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance will be demonstrated through quarterly monitoring of visible emissions.

14. Emission Units EU-1 through EU-5 are subject to the process weight rate emission limitations under LRAPA 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in LRAPA 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance will be demonstrated through quarterly monitoring of visible emissions.
15. Under LRAPA 32-007, the facility must prepare and update, as needed, an Operation and Maintenance Plan (O&M Plan) for all particulate matter emission control devices. If the O&M Plan is updated, the facility must submit the updated copy to LRAPA for review. The permittee must submit a copy of the O&M Plan to LRAPA for review upon request. If LRAPA determines the O&M Plan is deficient, LRAPA may require the permittee to amend the plan. At a minimum, the O&M Plan must identify the frequency of inspections for each control device and procedures for documenting each inspection. Documentation of each inspection must include the date and time of each inspection, the person or entity performing the inspection, identification of the equipment inspected, the results of each inspection, and the actions taken if repairs or maintenance are necessary.

Typically Achievable Control Technology (TACT)

16. LRAPA 32-008(1) requires an existing unit at a facility to meet TACT if the emission unit meets the following criteria: The emission unit is not already subject to emission standards for the regulated pollutant under LRAPA title 30, title 32, title 33, title 38, title 39 or title 46 at the time TACT is required; the source is required to have a permit; the emission unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.
17. The facility emits greater than ten (10) tons per year of VOC from Emission Unit EU-1 and is, therefore, required to meet TACT. While a formal TACT determination has not been conducted, LRAPA has determined that the use of high volume, low pressure (HVLP), airless, or air-assisted airless (AAA) spray gun technology likely meets the TACT requirements for this facility.

New Source Performance Standards

18. There are no NSPS applicable to emission units at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

19. LRAPA reviewed the following NESHAPs to determine their applicability to this facility:
 - 19a. 40 CFR Part 63, Subpart MMMM - National Emission Standards for Hazardous Air Pollutants for Surface Coating of miscellaneous Metal Parts and Products is not applicable to the facility because the facility is not a major source of HAPs.
 - 19b. 40 CFR Part 63, Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources is not applicable to the facility because the facility does not use methylene chloride for paint stripping, it is not an autobody refinishing operation, and the surface coatings used at the facility do not contain the target HAPs listed under the regulation.

- 19c. 40 CFR Part 63, Subpart XXXXXX - National Emission Standards for Hazardous Air Pollutants: Nine Metal Fabrication and Finishing Source Categories is not applicable to the source because the facility is not primarily engaged in the operations listed in 40 CFR 63.11514(a).

Plant Site Emission Limits (PSELs)

20. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and potential-to-emit:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	
PM	NA	NA	0	NA	NA	0.4
PM ₁₀	NA	NA	0	NA	NA	0.4
PM _{2.5}	NA	NA	0	NA	NA	0.4
CO	NA	NA	0	NA	NA	0
NO _x	NA	NA	0	NA	39	8
SO ₂	NA	NA	0	NA	NA	0
VOC	NA	NA	0	39	39	27
GHGs	NA	NA	0	NA	NA	0
Individual FHAP	NA	NA	NA	9	9	5
Aggregate FHAP	NA	NA	NA	24	24	13

- 20a. The facility has no baseline emission rates for PM, PM₁₀, CO, NO_x, SO₂, and VOC because the facility was not in operation during the 1978 baseline year. A baseline emission rate is not established for PM_{2.5} in accordance with LRAPA 42-0048(3).
- 20b. The facility has not requested a baseline emission rate for GHGs. For GHGs, the baseline emission rate is any consecutive 12 calendar month period during calendar years 2000 through 2010.
- 20c. The netting basis for PM, PM₁₀, CO, NO_x, SO₂, VOC, and GHGs are the same as the baseline emission rates. The netting basis for PM_{2.5} has been set to zero (0) in accordance with LRAPA 42-0046(2)(b).
- 20d. No PSELs were established for PM, PM₁₀, PM_{2.5}, SO₂, CO, and GHGs because these pollutants will be emitted from the facility at no more than the de minimis emission levels listed in LRAPA title 12.
- 20e. Under LRAPA 42-0041(1), sources with a potential to emit for a regulated pollutant less than the SER will receive a source specific PSEL set equal to the generic PSEL level. The potential emissions of NO_x and VOC from the facility are less than the applicable SERs of 40 TPY and 40 TPY, respectively. The proposed PSELs for NO_x and VOC have been established at the generic PSEL levels of 39 and 39 TPY, respectively.

Significant Emission Rate

21. The PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 for all pollutants as shown below.

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
PM	NA	NA	0	0	25
PM ₁₀	NA	NA	0	0	15

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
PM _{2.5}	NA	NA	0	0	10
CO	NA	NA	0	0	100
NO _x	39	39	0	39	40
SO ₂	NA	NA	0	0	40
VOC	39	39	0	0	40
GHGs	NA	NA	0	0	75,000

Unassigned Emissions and Emission Reduction Credits

22. The facility has no unassigned emissions as shown in the table below. Unassigned emissions are equal to the netting basis minus the source's current PTE, minus any banked emission reduction credits. The facility has zero (0) tons of emission reduction credits. In accordance with LRAPA 42-0055 the maximum unassigned emissions may not be more than the SER.

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	0	0.4	0	0	25
PM ₁₀	0	0.4	0	0	15
PM _{2.5}	0	0.4	0	0	10
CO	0	0	0	0	100
NO _x	0	8	0	0	40
SO ₂	0	0	0	0	40
VOC	0	27	0	0	40
GHGs	0	0	0	0	75,000

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

23. This source is located in an area that is designated attainment or unclassified for all regulated pollutants other than CO and PM₁₀. For pollutants other than CO and PM₁₀, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR. For CO and PM₁₀, the source is located in a maintenance area for which the Major NSR applicability threshold is 100 TPY. As this facility is de minimis for CO and PM₁₀, it is not subject to Major NSR.

Federal Hazardous Air Pollutants/Toxic Air Contaminants

24. WP is currently a synthetic minor source of FHAPs because the facility has specific FHAP limitations that restrict the emissions of any individual FHAP to no more than 9 TPY and the emissions of the aggregate of all FHAPs to no more than 24 TPY. Upon issuance of the renewed Standard ACDP, WP will remain a synthetic minor source of FHAPs.
25. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 toxic air contaminants. The FHAPs and toxic air contaminants listed below are based upon source testing and standard emission factors for the types of emission units at this facility. After the source is notified by

LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially

26. The table below represents the potential emissions of FHAPs/TACs from WP assuming operation at full capacity as represented in the emission detail sheets included in this review report. The potential emissions are calculated based on standard emission factors for the types of emission units at this facility and material balance calculations.

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
95-63-6	1,2,4-Trimethylbenzene	5.13	No	Yes
67-64-1	Acetone	2.80	No	Yes
85-68-7	Butyl Benzyl Phthalate	5.1E-02	No	Yes
98-82-8	Cumene	0.30	Yes	Yes
100-41-4	Ethylbenzene	1.52	Yes	Yes
2807-30-9	Ethylene Glycol Propyl Ether	1.2E-02	Yes	Yes
78-93-3	Methyl Ethyl Ketone	0.37	No	Yes
80-62-6	Methyl Methacrylate	1.1E-02	Yes	Yes
71-36-3	n-Butanol	0.14	No	Yes
108-65-6	Propylene Glycol Methyl Ether Acetate	0.46	No	Yes
540-88-5	t-Butyl Acetate**	18.7	No	Yes
108-88-3	Toluene	1.47	Yes	Yes
1330-20-7	Xylene, Mixed Isomers	4.84	Yes	Yes
Metals				
7429-90-5	Aluminum and Compounds	2.8E-03	No	Yes
7440-43-9	Cadmium	1.6E-05	Yes	Yes
18540-29-9	Chromium (VI), chromate/dichromate particulate	1.2E-03	Yes	Yes
7440-47-3	Chromium*	6.2E-02	Yes	Yes
7440-48-4	Cobalt	1.9E-04	Yes	Yes
7440-50-8	Copper	3.5E-04	No	Yes
7439-92-1	Lead	1.4E-05	Yes	Yes
7439-96-5	Manganese	6.9E-02	Yes	Yes
7440-02-0	Nickel	2.7E-02	Yes	Yes
1314-13-2	Zinc Oxide	1.7E-03	No	Yes
7440-66-6	Zinc Phosphate	1.3E-02	No	Yes
Highest Individual Pollutant (TPY) =			5.1	18.7
Aggregate of All Pollutants (TPY) =			13.4	36.0

*Total chromium is an FHAP. CAO regulates only Chromium (VI).

**t-Butyl Acetate is not considered a VOC.

Toxic Release Inventory

27. The Toxics Release Inventory (TRI) is federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

- Cancer or other chronic human health effects;
- Significant adverse acute human health effects; or
- Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

WP reported the release of the following TRI-listed chemicals for the year 2020: 250 pounds of chromium, 5 pounds of copper, 19 pounds of manganese, and 250 pounds of nickel.

Compliance History

28. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since 1979:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	02/10/2004	In compliance
LRAPA - Full Compliance Evaluation	08/02/2005	In compliance
LRAPA - Full Compliance Evaluation	07/09/2008	In compliance
LRAPA - Full Compliance Evaluation	08/17/2012	Not in compliance – NON 3425
LRAPA - Full Compliance Evaluation	10/24/2018	In compliance
EPA & LRAPA - Full Compliance Evaluation	09/21/2021	Processing – Status Currently Undetermined

29. LRAPA has issued the following violation notices and/or has taken the following enforcement actions against this facility:
- 29a. The facility received Notice of Non-Compliance 3425 on October 25, 2012 for failure to maintain VOC and FHAP rolling 12-month emissions calculations, failure to comply with 40 CFR 63 subpart 6X requirements, failure to maintain current Safety Data Sheets or Certified Product Data Sheets of materials used, failure to submit semi-annual reports and failure to submit Notification of Construction/Modification forms. Notice of Civil Penalty 12-3425 was received by the facility on December 11, 2012 for the aforementioned lack of submittal of a Notification of Construction/Modification, referring to the installation of a Farr Baghouse without notifying LRAPA in writing. The fine was assessed as a Class III, Moderate Violation resulting in a \$700 civil penalty. On December 28, 2012, the facility requested a reduction of the civil penalty and affirmed that action had been taken to ensure compliance. The civil penalty was ultimately reduced to \$450, paid by the facility on January 13, 2013 and the file was closed.

Performance Test Results

30. The facility is not required to conduct performance testing because emissions can be reasonably estimated using industry-specific emissions factors. LRAPA is not aware of any performance testing conducted at this facility.

Recordkeeping Requirements

31. The facility is required to keep and maintain a record of the following information for a period of at least five (5) years:

Activity	Parameter	Units	Minimum Recording Frequency
VOC/HAP-containing material Usage	Material name and usage	Gallons	Monthly
VOC/HAP-containing material Usage	Density of material	Pounds per gallon	Each coating and solvent
VOC-containing material usage	VOC content	% by weight	Each coating and solvent
HAP-containing material usage	Individual HAP content	% by weight	Each coating and solvent
Spray booth filter particulate matter control efficiency	Control efficiency	%	Maintain documentation from each filter manufacturer
Spray booth filter replacement	Each occurrence	NA	Upon Replacement
Spray booth training	Training logs / certifications	NA	Maintain documentation of training
Laser or plasma cutter operation	Usage	Hours	Monthly
Welding rod/welding wire usage	Rod/wire type and usage	Pounds	Monthly
Fugitive emissions survey	Log	NA	Monthly
Visible emissions survey	Log	NA	Monthly
Upset log of all planned and unplanned excess emissions	See G15 of the permit	NA	Per occurrence

Reporting Requirements

32. The facility must submit to LRAPA the following reports by no later than the dates indicated in the table below:

Report	Reporting Period	Due Date
Calculations of emissions to demonstrate compliance with the PSEL limitations as calculated according to Conditions Error! Reference source not found. through Error! Reference source not found. of the permit, including the supporting process parameter and emission factor information. The report due on February 15 must include the annual usage of welding rod/wire.	Semiannual	February 15, August 15
A summary of any fugitive emissions observed, and any corrective actions taken, during the fugitive emissions surveys.	Annual	February 15
A summary of any visible emissions exceedances observed, and any corrective actions taken, during the visible emissions surveys.	Annual	February 15
A summary of maintenance and repairs performed on any particulate matter pollution control devices at the facility.	Annual	February 15
The upset log information required by Condition G13 of the permit, if required by G13.	Annual	February 15

Public Notice

33. The proposed permit will be on public notice from July 6, 2022 to August 9, 2022. Written comments may be submitted during the 35-day comment period. If requested by ten (10) or more individuals or an individual representing a group of more than ten (10) individuals, there will be a public hearing following the comment period.

After the comment period and hearing (if requested), LRAPA will respond to comments received and then take final action to issue or deny the permit within 45 days of the close of the public comment or hearing period.

JJW/cmw
07/01/2022

Western Pneumatics - 208929																													
Emission Detail Sheets																													
Facility Emission Summary																													
Criteria Pollutants																													
EU ID	Emission Unit Description	PM (TPY)	PM ₁₀ (TPY)	PM _{2.5} (TPY)	SO ₂ (TPY)	NO _x (TPY)	CO (TPY)	VOC (TPY)	GHG (TPY)																				
Significant Emission Units																													
EU-1	Spray Booth	0.34	0.34	0.34	--	--	--	26.6	--																				
EU-2	Laser Cutter	1.1E-02	1.1E-02	1.1E-02	--	3.96	--	--	--																				
EU-3	Plasma Cutter	1.3E-02	1.3E-02	1.3E-02	--	3.96	--	--	--																				
Aggregate Insignificant Emissions																													
EU-4	Blast Room	3.3E-02	3.3E-02	3.3E-02	--	--	--	--	--																				
EU-5	Welding Operations	1.1E-01	1.1E-01	1.1E-01	--	--	--	--	--																				
Total =		0.5	0.5	0.5	0	8	0	27	0																				
Hazardous Air Pollutants/Toxic Air Contaminants																													
Federal Hazardous Air Pollutants																													
Oregon Toxic Air Contaminants																													
EU ID	Emission Unit Description	Acetone	Butyl Benzyl Phthalate	t-Butyl Acetate	Aluminum and Compounds	Methyl Ethyl Ketone	Zinc Oxide	n-Butanol	Zinc Phosphate	Propylene Glycol Methyl Ether Acetate	Copper	1,2,4-Trimethylbenzene	Ethylbenzene	Methyl Methacrylate	Cobalt	Ethylene Glycol Propyl Ether	Cumene	Toluene	Xylene, Mixed Isomers	Manganese	Nickel	Lead	Chromium*	Chromium (VI)	Cadmium				
EU-1	Spray Booth	2.80	5.1E-02	18.7	4.7E-03	0.37	2.9E-03	0.14	2.2E-02	0.46		5.13	1.52	1.1E-02	1.3E-04	1.2E-02	0.30	1.47	4.84										
EU-2	Laser Cutter										1.5E-04																		
EU-3	Plasma Cutter										1.9E-04																		
EU-4	Blast Room										1.4E-05																		
EU-5	Welding Operations														1.2E-04														
Total (TPY) =		2.80	5.1E-02	18.7	4.7E-03	0.37	2.9E-03	0.14	2.2E-02	0.46	3.5E-04	5.13	1.52	1.1E-02	2.5E-04	1.2E-02	0.30	1.47	4.84	6.9E-02	2.7E-02	1.4E-05	6.2E-02	1.2E-03	1.6E-05				
Total Potential Federal HAPs Emissions =				13.4	TPY																								
Max Potential Individual Federal HAP Emissions =				5.13	TPY																								
Notes:										CAO regulates only Chromium (VI).																			

Western Pneumatics - 208929
Emission Detail Sheets
Laser/Plasma Cutters

PM/PM₁₀/PM_{2.5} Emissions

Unit Identification	Cutting Technique	Metal Type	Metal Thickness (Inches)	Kerf (Inches)	Metal Cutting Speed (IPM)	Control Device Type	% Control Efficiency	Specific Gravity	Density Conversion (lb/in ³)	Fume Generated (% of Particulate Generated)	PM/PM _{2.5} /PM ₁₀ Emission Factor (lb/inch)	Metal Feed Rate (IPH)	Uncontrolled Emissions (lb/hr)	Potential Emissions (lb/hr)	Uncontrolled Emissions (TPY)	Potential Emissions (TPY)
Laser Cutter	Dry	Mild Steel	0.25	0.01	115	Baghouse	99	7.83	0.28	5	3.5E-05	6900	0.24	2.4E-03	1.07	1.1E-02
Plasma Cutter	Dry	Mild Steel	0.25	0.01	145	Baghouse	99	7.83	0.28	5	3.5E-05	8700	0.31	3.1E-03	1.35	1.3E-02
Total =													0.55	5.5E-03	2.42	2.4E-02

NOx Emissions

Unit Identification	Cutting Technique	Metal Type	NOx Emission Factor (g/min)	Potential Emissions (lb/hr)	Potential Emissions (TPY)
Laser Cutter	Dry	Mild Steel	6.83	0.90	3.96
Plasma Cutter	Dry	Mild Steel	6.83	0.90	3.96
Total =				1.81	7.92

HAP/TAC Emissions

Unit Identification	Pollutant	CAS No.	Fume Percent	Uncontrolled Emissions (lb/hr)	Potential Emissions (lb/hr)	Uncontrolled Emissions (TPY)	Potential Emissions (TPY)
Laser Cutter	Copper	7440-50-8	1.4%	3.4E-03	3.4E-05	1.5E-02	1.5E-04
	Manganese	7439-96-5	10%	2.4E-02	2.4E-04	1.1E-01	1.1E-03
Plasma Cutter	Copper	7440-50-8	1.4%	4.3E-03	4.3E-05	1.9E-02	1.9E-04
	Manganese	7439-96-5	10%	3.1E-02	3.1E-04	1.3E-01	1.3E-03

Fume Generation Rate/Specific Gravity Table

Metal	Dry	Semidry	Wet	Specific Gravity
Mild Steel, 8mm	5	0.5	0.05	7.83
Stainless Steel, 8mm	7	0.7	0.07	7.7
Stainless Steel, 35mm	1	0.1	0.01	7.7

NOx Emission Rate Table

Metal	Dry (l/min)	Semidry (l/min)	Wet (l/min)
Mild Steel, 8mm	4.95	2.75	1.05
Stainless Steel, 8mm	4.75	2.45	1.15
Stainless Steel, 35mm	7.4	3.9	1.95

Notes:

Emissions are based on "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel" by Bromsen B. et al. (1994)
 The calculations assume the use of air as the plasma gas. Oxygen as plasma gas lowers fume emissions by 25%. Nitrogen as plasma gas lowers NOx emissions by 20%.
 NOx emissions assume NO₂ is 7.5% of the total emissions of NOx (NO and NO₂). Assumes NO has a density of 1.34 g/L and NO₂ has a density of 1.88 g/L.
 Mild steel fume is 67-73% iron, 2-10% manganese, and ND-1.4% copper.
 310 stainless steel fume is 25.4% iron, 4.4% manganese, 10.3% nickel, and 20.2% chromium(VI).
 Potential emissions assume 8760 hours per year of operation.

Western Pneumatics - 208929								
Emission Detail Sheets								
Welding Operations								
2020 Actual GMAW Welding Wire/Rod Usage =	7.84	1000 lbs						
2020 Actual FCAW Welding Wire/Rod Usage =	1.96	1000 lbs						
Scale Up Factor =	3							
Criteria Pollutants		2020 Welding Wire/Rod Usage By Type						
Pollutant	Cas No.	Potential Emissions (lb/hr)	Potential Emissions (TPY)					
Total Particulate	--	1.2E-05	0.11					
PM ₁₀	--	1.2E-05	0.11					
PM _{2.5}	--	1.2E-05	0.11					
Emission Factors (lb/10 ³ lb)								
Process	Type	Fume	Chromium	Chromium (VI)	Cobalt	Manganese	Nickel	Lead
GMAW	E308L	5.4	5.24	ND	0.01	3.46	1.84	ND
GMAW	ER316	3.2	5.28	0.1	ND	2.45	2.26	ND
GMAW	E70S	5.2	0.01	ND	0.01	3.18	0.01	ND
FCAW	E70T	15.1	0.04	ND	ND	8.91	0.05	ND
HAP/TAC Emissions								
Pollutant	Cas No.	Potential Emissions (lb/hr)	Potential Emissions (TPY)					
Chromium (Total)	7440-47-3	7.1E-06	6.2E-02					
Chromium (VI)	18540-29-9	1.3E-07	1.2E-03					
Cobalt	7440-48-4	1.3E-08	1.2E-04					
Manganese	7439-96-5	7.6E-06	6.7E-02					
Nickel	7440-02-0	3.1E-06	2.7E-02					
Lead	7439-92-1	0.0E+00	0.0E+00					
Notes:								
Assumes highest emitting welding wire/rod for calendar year 2020 based on welding type.								
ND (No Detect) is represented as zero.								
<' than the detection limit values represented as the detection limit.								
Lead is assumed to be from lead compounds.								
The NOx and CO emissions from welding are assumed to be negligible.								
Hourly emissions are based on annual usage divided by 8760.								

Western Pneumatics - 208929						
Emission Detail Sheets						
Blast Booth						
Maximum sand blast material used =			600	pounds per hour		
Control efficiency of the baghouse =			99.9%			
Criteria Pollutants						
Pollutant	CAS No.	Emission Factor (lb/ton)	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (TPY)	Potential Emissions (lb/hr)	Potential Emissions (TPY)
Total Particulate	--	25	7.50	32.85	7.5E-03	3.3E-02
PM ₁₀	--	25	7.50	32.85	7.5E-03	3.3E-02
PM _{2.5}	--	25	7.50	32.85	7.5E-03	3.3E-02
HAP/TAC Emissions						
Pollutant	CAS No.	Emission Factor (lb/ton)	Uncontrolled Emissions (lb/hr)	Uncontrolled Emissions (TPY)	Potential Emissions (lb/hr)	Potential Emissions (TPY)
Cadmium	7440-43-9	1.2E-02	3.6E-03	1.6E-02	3.6E-06	1.6E-05
Chromium (III)	7440-47-3	1.2E-01	3.6E-02	1.6E-01	3.6E-05	1.6E-04
Copper	7440-50-8	1.1E-02	3.2E-03	1.4E-02	3.2E-06	1.4E-05
Lead	7439-92-1	1.1E-02	3.2E-03	1.4E-02	3.2E-06	1.4E-05
Manganese	7439-96-5	1.2E-01	3.6E-02	1.6E-01	3.6E-05	1.6E-04
Nickel	7440-02-0	1.2E-01	3.6E-02	1.6E-01	3.6E-05	1.6E-04
Notes:						
Sand blast emission factors from San Diego Air Pollution Control District.						
Facility uses a sand blast media that does not contain respirable silica (Green Diamond).						
PM ₁₀ and PM _{2.5} emissions are assumed to equal total particulate matter due to lack of information.						
Assumes blast booth operates 8760 hours per year.						

