LANE REGIONAL AIR PROTECTION AGENCY
1010 Main Street, Springfield, Oregon 97477
(541) 736-1056

SIMPLE AIR CONTAMINANT DISCHARGE PERMIT
SIMPLE ACDP

Issued in accordance with provisions of title 37, Lane Regional Air Protection Agency's Rules and Regulations, and based on the land use compatibility findings included in the permit record.

Issued To:
Pacific Recycling, Inc
P.O. Box 2633
Eugene, Oregon 97402

Facility Location:
Pacific Recycling, Inc.
3300 Cross Street
Eugene, Oregon 97402

Information Relied Upon:
Application Number: 68914
Date: November 4, 2022

Land Use Compatibility Statement:
From: City of Eugene
Date: December 14, 2012

Permit Number: 206460
Permit Type: Simple
Primary SIC: 5093 – Scrap and Waste Materials
Secondary SIC: NA
Issuance Date: July 10, 2024
Expiration Date: July 10, 2034

Travis Knudsen, Executive Director

7/9/24
Effective Date

Source(s) Permitted to Discharge Air Contaminants (LRAPA 37-8010):

Table 1 Code	Source Description
Part B, 75	All other sources not listed herein which would have actual emission, if the source were to operate uncontrolled, of 5 or more tons per year of direct PM_{10} if located in a PM_{10} nonattainment or maintenance area, or 10 or more tones per year of any single criteria pollutant if located in any part of Lane County

Renewal and Non-Technical Modification

In accordance with Subparagraph 37-0064(5)(b)(A) of LRAPA's Rules and Regulations, Air Contaminant Discharge Permit No. 206460 is hereby renewed and amended to include the set of General Conditions (G.1 through G.40) updated by LRAPA on June 6, 2024.

Permitted Activities

1. Until this permit expires or is revoked, the permittee is herewith allowed to discharge exhaust gases containing contaminants only in accordance with the permit application and the requirements, limitations, and conditions contained in this permit. This specific listing of requirements, limitations, and conditions does not relieve the permittee from complying with all other rules of Lane Regional Air Protection Agency (LRAPA).

    a. Any categorically insignificant activities, as defined in LRAPA title 12, at the source; and

    b. Construction or modification changes that are a Type 1 or Type 2 change under LRAPA 34-035 in accordance with LRAPA 34-010 and 34-035 through 34-038.

Emission Unit Description

2. The emission units (EUs) regulated by this permit are the following:

EU ID	Emission Unit (EU)	Control Device
EU1	Metal Shredder	NA
EU2	Material Conveying & Dropping	3-sided enclosures
EU3	Storage Piles	3-sided enclosures
EU4	Automobile Fluid Draining	NA
EU5	Torch Cutting	NA
EU6	Unpaved Road Emissions	Work Practices

Plant Site Emission Limits (PSELs)

3. Total emissions from all sources located at the facility must not exceed the PSELs below. The PSEL applies to any 12 consecutive calendar month period. [LRAPA 42-0080(3) and OAR 340-222-0041(2)]

Annual Plant Site Emission Limits (PSELs)

Pollutant	Plant Site Emission Limit (tons/year)
PM	11
PM_{10}	4.6
$PM_{2.5}$	1.9
VOC	39

4. Any changes in operation that may increase the emissions above the PSELs must be approved by LRAPA. Failure to do so may result in enforcement actions being taken by LRAPA. [LRAPA 42-0080]

PSEL Monitoring and Compliance

5. By the 15th day of each month, the permittee must determine compliance with the previous consecutive 12 calendar month PSELs. Compliance with the PSELs are determined for each consecutive 12-month period based on the following calculation for each pollutant for each emission unit: [LRAPA 34-016 and LRAPA 42-0080]

$$E = \sum \left(\frac{P \times EF}{2000} \right) + ER_{Storage\ Piles}$$

Where, E = The total emissions (tons) for a production throughput type.
∑ = The symbol representing "summation of".
P = The total production throughput or process parameter.
EF = The emission factor in pounds emission per tons of throughput (see Condition 6).
ER = The emissions rate in tons per year (see Condition 6).
2,000 = The number of pounds in a short ton.

6. The permittee must use the following emission rates or emission factors for calculating pollutant emissions unless alternative emission rates or emission factors are approved by LRAPA. The permittee may request the use of alternative emission rates or emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors). The use of alternative emission rates or emission factors is not allowed until the alternative emission rates or emission factors have been reviewed and approved by LRAPA using procedures in title 34 and/or title 37, as appropriate. [LRAPA 34-016 and 42-0080]

Emission Factors to be used for calculating emissions based on throughputs:

Production Throughput	Pollutant	EF	Units
Total Shredder Throughput (ton)	PM	0.0385	lb/ton
Total Shredder Throughput (ton)	PM_{10}	0.0254	lb/ton
Total Shredder Throughput (ton)	$PM_{2.5}$	0.0155	lb/ton
Total Autos Shredded (ton)	VOC	0.6429	lb/ton
Total Non-Auto Throughput (ton)	VOC	0.2528	lb/ton
Unpaved Road Dust	PM	0.259	lb/vehicle
Unpaved Road Dust	PM_{10}	0.066	lb/vehicle
Unpaved Road Dust	$PM_{2.5}$	0.0066	lb/vehicle
Torch Cutting	PM, PM_{10}, and $PM_{2.5}$	0.05	lb/hr

Emission Rates (ER) to be used for calculating emissions based on potential emissions:

Emission Unit	Pollutant		
	PM	PM_{10}	$PM_{2.5}$
Storage Piles (ton/yr)	0.43	0.20	0.031

Performance Standards and Limitations

7. The permittee must take reasonable precautions to prevent fugitive dust emissions from leaving the property of a source for a period or periods totaling more than 18 seconds in a six-minute period. Fugitive emissions must be measured by EPA method 22 with a minimum observation time of at least six (6) minutes. Reasonable precautions include, but are not limited to the following: [LRAPA 48-015(1)&(3)]

    a. Using where possible, water or chemicals for control of dust in the demolition of existing buildings or structure, construction operations, the grading of roads or the clearing of land;

    b. Applying water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;

    c. Storing, transporting, and waste removal of material collected from air pollution control equipment using methods that prevent the material from becoming airborne, such as: covering or fully enclosing waste containers, and wetting down the material before it is dumped for waste removal, or other methods that are equally effective in preventing the material from becoming airborne; and

    d. Operating all contaminant generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.

8. All auto bodies accepted for scrap must have all fluids drained and engine blocks, mercury switches, batteries and lead components removed prior to entering the shredder. [LRAPA 32-007(1)]

9. The water suppression system on the shredder must be operated at all times in accordance with the manufacturing specifications. [LRAPA 32-007(1)]

10. The permittee must demonstrate compliance with Conditions 7 through 9 by conducting a fugitive emission survey. At least once each week for a minimum period of 30 minutes, the permittee must visually survey the facility using EPA Method 22 for any sources of fugitive emissions. For purposes of this condition, fugitive emissions are visible emissions that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period. The person conducting EPA Method 22 does not have to be EPA Method 9 certified. However, the person conducting EPA Method 22 should be familiar with the procedures of EPA Method 9, including using the proper location to observe visible emissions. [LRAPA 34-016(1) and LRAPA 48-015(2)&(3)]

    a. If sources of fugitive emissions are identified that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period, the permittee must Immediately take corrective action to minimize the fugitive emissions, including but not limited to those actions identified in Conditions 7 through 9. After taking corrective action to eliminate the visible emissions, the permittee must conduct another fugitive emissions survey using EPA Method 22 within 24 hours of the previous fugitive emissions survey.

    b. If the fugitive emissions survey performed within 24 hours of the previous fugitive emissions survey detects visible emissions that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period, the permittee must immediately notify LRAPA. LRAPA may require the facility to update their O&M Plan required by Condition 16 to include extra precautions for preventing visible emissions from leaving the property.

11. The permittee must keep documentation of all visible emissions surveys required by Condition 10. For all corrective actions taken, the permittee must record the date, time, person or entity performing the corrective action, and the corrective actions taken, as applicable. [LRAPA 34-016(1)]

12. All plant process equipment and all air contaminant collection and disposal facilities, including any bin vents, must be operated and maintained at the highest and best practicable treatment and control of air contaminant emissions so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction, odors, soiling, and other deleterious factors at the lowest possible levels. [LRAPA 32-005(1)]

Asbestos

13. Prior to the dismantling, scrapping, or shredding of mobile homes, motorhomes, RV's, and travel trailers that are subject to the demolition/renovation requirements in LRAPA title 43, the permittee must follow all applicable title 43 survey, abatement, and disposal requirements. This documentation must be retained onsite for at least five (5) years after disposal. [LRAPA title 43, 34-016(6)]

Chlorofluorocarbon Removal

14. When removing automobile air conditioning coolant, the permittee must use only recovery and recycling equipment that is certified by the Underwriters Laboratory (UL) as meeting the requirements and specifications of UL1963 and the Society of Automotive Engineers (SAE) Standards, J1990 and J1991, or other requirements and specifications determined by LRAPA as being equivalent. [OAR 340-260-0030(3) & OAR 340-200-0010(3)]

15. The permittee must operate and maintain all recovery and recycling equipment at full efficiency and effectiveness according to the manufacturer's directions and guidelines contained in SAE Standard J1989. [OAR 340-260-0030(4) & OAR 340-200-0010(3)]

Monitoring Requirements

16. The permittee must submit an initial Operation and Maintenance Plan (O&M Plan) within 60 days of the issuance of this permit. The permittee must demonstrate compliance with Conditions 7 through 9 and Conditions 12 through 15 by preparing and updating, as needed, an O&M Plan. The O&M Plan must include requirements for the proper operation of equipment and control of fugitive emissions in accordance with LRAPA title 48. 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. [LRAPA 32-007(1)]

    a. The plan will include fugitive emissions sources, facility layout, training, monitoring, and operation and maintenance procedures to reduce fugitive emissions; and

    b. The permittee must keep records of all fugitive emission events and what corrective actions were taken.

17. For at least five (5) years, the permittee must maintain documentation of any asbestos surveys as required by title 43 in accordance with Condition 13. [LRAPA 32-007(1)(b)(B)]

18. The permittee must maintain certification for all recovery and recycling equipment in accordance with Condition 14. [LRAPA 32-007(1)(b)(B)]

19. The permittee must maintain documentation of the operation and maintenance of all recovery and recycling equipment in accordance with Condition 15. [LRAPA 32-007(1)(b)(B)]

Recordkeeping Requirements

20. A record of the following data must be maintained for a period of at least **five (5) years** at the plant site and must be available for inspection by authorized representatives of LRAPA: [LRAPA 34-016(1)&(5)]

Facility-Wide Activity	Parameter	Units	Minimum Recording Frequency
Automobiles Shredded	Material Processed	Tons of Autos	Monthly
Non-Automobile Metal Shredded	Material Processed	Tons of Non-Auto Metal	Monthly
Total Shredder Throughput	Material Processed	Tons	Monthly
Unpaved Roads	Number of Vehicles	Number	Monthly
Torch Cutting	Hours of Cutting	Hours	Monthly
Asbestos Records (Surveys, Abatement Notifications, Abatement Certifications, and Asbestos Waste Shipments) in accordance with Condition 13	NA	NA	Documentation
Certification for the removal of conditioning coolant in accordance with Condition 14	NA	NA	Documentation
Recovery and recycling equipment operation in accordance with Condition 15	NA	NA	Certification
General Recordkeeping			
Log of nuisance complaints	NA	NA	Upon receipt of complaint
Visible Emission Survey	Opacity	Percent	Monthly
Operation and Maintenance Plan	NA	NA	Maintain current version on-site
Standard Operating Procedure	NA	NA	Maintain current version on-site
Upset Log of all planned and unplanned excess emissions, as required by Condition G15	NA	NA	Per occurrence

Reporting Requirements

21. The facility must submit to LRAPA the following reports by no later than the dates indicated in the table below: [LRAPA 34-016(1) and 42-0080(5)].

Report	Reporting Period	Due Date
PSEL pollutant emissions as calculated according to Conditions 5 and 6, including supporting calculations.	Annual	February 15
Shredder throughput (Automobiles, Non-Automobile Metal, Total Shredder Throughput) according to Condition 6.	Annual	February 15
Number of vehicles for unpaved road emissions according to Condition 6.	Annual	February 15
Hours of torch cutting according to Condition 6.	Annual	February 15
A summary of maintenance and repairs performed on any pollution control devices at the facility.	Annual	February 15
A summary of all complaints received by the permittee and their resolution as required by Condition G11.	Annual	February 15
The excess emissions log required by Condition G16, if any planned or unplanned excess emissions have occurred during the reporting period.	Annual	February 15

22. Unless otherwise specified, all reports, test results, notifications, etc., required by the above terms and conditions must be reported to the following office: [LRAPA 34-016]

Lane Regional Air Protection Agency
1010 Main Street
Springfield, Oregon 97477
(541) 736-1056

Outdoor Burning

23. Commercial and industrial outdoor burning is prohibited, unless authorized pursuant to LRAPA 47-020. [LRAPA 47-015(4)&(5)]

Fee Schedule

24. In accordance with adopted regulations, the permittee will be invoiced for the annual permit fees by October 1st each year, with fees due on **December 1st** of each year. [LRAPA 37-8020 Table 2]

CNC/AA
07/08/2024

Abbreviations, Acronyms and Definitions

ACDP	Air Contaminant Discharge Permit
ADT	Air dry ton (contains 10% water)
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
BACT	Best Available Control Technology
BDT	Bone dry ton (all water removed), same as ODT
BER	Baseline Emission Rate
CAO	Cleaner Air Oregon
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2e	Carbon dioxide equivalent
DEQ	Oregon Department of Environmental Quality
dscf	Dry standard cubic foot
EPA	United States Environmental Protection Agency
EU	Emission Unit
FCAA	Federal Clean Air Act
ft^2	Square foot
GHG	Greenhouse gases
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by LRAPA title 44
I&M	Inspection and maintenance
lb	Pound(s)
LRAPA	Lane Regional Air Protection Agency
MM	Million
MACT	Maximum Achievable Control Technology
MMBtu	Million British thermal units
N/A	Not applicable
NAICS	North American Industry Classification System
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	Oxygen
OAR	Oregon Administrative Rules
ODT	Oven dried ton (all water removed), same as BDT
ORS	Oregon Revised Statutes
O&M	Operation and maintenance
PCD	Pollution control device
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
ppm	Part per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
scf	Standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	Sulfur dioxide
TACT	Typically Achievable Control Technology
TBACT	Toxics Best Available Control Technology
Therm	Approximately equivalent to energy from burning 100 cubic feet of natural gas
VE	Visible emissions
VOC	Volatile organic compound
year	A period consisting of any 12- consecutive calendar months

GENERAL PERMIT CONDITIONS

General Conditions and Disclaimers

G1. A copy of this Air Contaminant Discharge Permit (ACDP) must be available on site for inspection upon request. [LRAPA 37-0020(3)]

G2. The permittee must allow the Director or their authorized representatives to enter, during operation hours, any property, premises, or place for the purpose of investigating either an actual or suspected air contaminant source or to ascertain compliance or noncompliance with these rules or any issued order. The Director or their authorized representatives must also have access to any pertinent records relating to such property, including but not limited to blueprints, operation and maintenance records and logs, operating rules and procedures. [ORS 468.095 and LRAPA 13-020(1)(h)]

G3. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

Performance Standards and Emission Limits

G4. The permittee must not cause or permit the deposition of any particulate matter which is larger than 250 microns in size at sufficient duration and quantity, as to create an observable deposition upon the real property of another person. [LRAPA 32-055]

G5. The permittee must not discharge from any source whatsoever such quantities of air contamination which cause injury or damage to any persons, the public, business or property. Such determination to be made by LRAPA. [LRAPA 32-090(1)]

G6. The permittee must not cause or permit emission of water vapor if the water vapor causes or tends to cause detriment to the health, safety or welfare of any person or causes, or tends to cause damage to property or business. [LRAPA 32-090(2)]

G7. The permittee must not willfully cause or permit the installation or use of any device or use of any means which, without resulting in a reduction in the total amount of air contaminants emitted, conceals emissions of air contaminants which would otherwise violate LRAPA rules. [LRAPA 32-050(1)]

G8. The permittee must not cause or permit the installation or use of any device or use of any means designed to mask the emissions of an air contaminant which causes or tends to cause detriment to health, safety or welfare of any person. [LRAPA 32-050(2)]

G9. The permittee must not allow any materials to be handled, transported, or stored; or a building, its appurtenances or road(s) to be used, constructed, altered, repaired, or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from being airborne. [LRAPA 48-015(1)]

G10. The permittee may not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. [LRAPA 49-010(1)]

G11. To demonstrate compliance with Conditions G4 through G10, the permittee must provide LRAPA with written notification within five (5) days of all complaints received by the permittee during the operation of the facility and maintain a log of each complaint received by the permittee during the operation of the facility. Documentation must include date of contact, time of observed complaint condition, description of complaint condition, location of complainant, status of plant operation during the observed period, and time of response to complainant. The permittee must immediately (within one (1) hour during normal business hours) investigate the condition following the receipt of the complaint and the permittee must provide a response to the complainant within 24 hours, if possible, but no later than five (5) business days. [LRAPA 34-016(1)]

Excess Emissions: General Policy

G12. Emissions of air contaminants in excess of applicable standards or permit conditions are unauthorized and are subject to enforcement action. section 36-001 through 36-030 apply to any permittee operating a source which emits air contaminants in excess of any applicable air quality rule or permit condition, including but not limited to excess emissions resulting from the breakdown of air pollution control devices or operating equipment, process upset, startup, shutdown, or scheduled maintenance. Sources that do not emit air contaminants in excess of any applicable rule or permit condition are not subject to the recordkeeping and reporting requirements in title 36. Emissions in excess of applicable standards are not excess emissions if the standard is in an NSPS or NESHAP and the NSPS or NESHAP exempts startups, shutdowns and malfunctions as defined in the applicable NSPS or NESHAP. [LRAPA 36-001(1)]

Excess Emissions: Notification and Record-keeping

G13. This condition applies to all excess emissions not addressed in sections 36-010 and 36-015. [LRAPA 36-020(1)]

a. The permittee, of a small source, as defined by subsection 36-005(2), need not immediately notify LRAPA of excess emissions events unless otherwise required by permit condition, written notice by LRAPA, or if the excess emission is of a nature that could endanger public health. [LRAPA 36-020(1)(b)]

b. Notification must be made to the LRAPA office. The current LRAPA telephone number during regular business hours (8 a.m. - 5 p.m., M-F) is (541) 736-1056. During nonbusiness hours, weekends, or holidays, the permittee must immediately notify LRAPA by calling the LRAPA Upset/Complaint Line. The current number is (541) 726-1930.

c. Follow-up reporting, if required by LRAPA, must contain all information required by Condition G16.

G14. At each annual reporting period specified in this permit, or sooner if required by LRAPA, the permittee must submit a copy of the excess emission log entries for the reporting period, as required by Condition G16. [LRAPA 36-025(4)(a)]

G15. Any excess emissions which could endanger public health or safety must immediately be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311.

G16. The permittee must keep an excess emissions log of all planned and unplanned excess emissions. The excess emissions log must include the following: [LRAPA 36-025(3) and 36-025(1)]

a. The date and time of the beginning of the excess emission event and the duration or best estimate of the time until return to normal operation;

b. The date and time the permittee notified LRAPA of the event;

c. The equipment involved;
d. Whether the event occurred during startup, shutdown, maintenance, or as a result of a breakdown, malfunction, or emergency;

e. Steps taken to mitigate emissions and corrective actions taken;

f. The magnitude and duration of each occurrence of excess emissions during the course of an event and the increase over normal rates or concentrations as determined by continuous monitoring or a best estimate, supported by operating data and calculations;

g. The final resolution of the cause of the excess emissions; and

h. Where applicable, evidence supporting any claim that emissions in excess of technology-based limits were due to an emergency pursuant to section 36-040.

Excess emissions logs must be kept by the permittee for five (5) calendar years. [LRAPA 36-025(3)]

Excess Emissions: Scheduled Maintenance

G17. If the permittee anticipates that scheduled maintenance of air contaminant sources or air pollution control devices may result in excess emissions, the permittee must obtain prior LRAPA authorization of procedures that will be used to minimize excess emissions. Application for approval of procedures associated with the scheduled maintenance must be submitted and received by LRAPA in writing at least seventy-two (72) hours prior to the event. The application must include the following: [LRAPA 36-015(1)]

a. The reasons explaining the need for maintenance, including but not limited to: why the maintenance activity is necessary; why it would be impractical to shut down the source operation during the maintenance activity; if applicable, why air pollution control devices must be by-passed or operated at reduced efficiency during the maintenance activity; and why the excess emissions could not be avoided through better scheduling for maintenance or through better operation and maintenance practices;

b. Identification of the specific production or emission control device or system to be maintained;

c. Identification of the nature of the air contaminants likely to be emitted during the maintenance period, and the estimated amount and duration of the excess emissions, including measures such as the use of overtime labor and contract services and equipment that will be taken to minimize the length of the maintenance period; and

d. Identification of specific procedures to be followed which will minimize excess emissions at all times during the scheduled maintenance.

G18. LRAPA will approve the procedures if it determines that they are consistent with good pollution control practices, will minimize emissions during such period to the extent practicable, and that no adverse health impact on the public will occur. The permittee must record all excess emissions in the excess emissions log as required in Condition G16 Approval of the procedures in Condition G17 does not shield the permittee from an enforcement action, but LRAPA will consider whether the procedures were followed in determining whether an enforcement action is appropriate. [LRAPA 36-015(2)]

G19. No scheduled maintenance associated with the approved procedures in Condition G18 that is likely to result in excess emissions may occur during any period in which an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency has been declared, or during an announced yellow or red woodstove advisory period, in areas determined by LRAPA as $PM_{2.5}$ or PM_{10} nonattainment areas. [LRAPA 36-015(6)]

G20. In cases where LRAPA has not received notification of scheduled maintenance that is likely to cause excess emissions within the required 72 hours prior to the event according to Condition G17, or where such approval has not been waived pursuant to subsection 36-015(3), the permittee must immediately notify LRAPA by telephone of the situation, and must be subject to the requirements of Conditions G14 and G16. [LRAPA 36-015(7)]

Air Pollution Emergencies

G21. The permittee must, upon declaration of an air pollution alert, air pollution warning, or air pollution emergency, take all emission reduction measures specified in Tables I, II, and III of title 51. Permittees responsible for a source of air contamination within a Priority I AQCR must, upon declaration of an episode condition affecting the locality of the air contamination source, take all appropriate actions specified in the applicable table and must take all appropriate actions specified in an LRAPA-approved preplanned abatement strategy for such condition which has been submitted and is on file with LRAPA. [LRAPA 51-015]

Notification of Construction/Modification

G22. The permittee must notify LRAPA in writing using an LRAPA "Notice of Intent to Construct" form, or other permit application forms and obtain approval in accordance with section 34-010 and 34-035 through 34-038 before: [LRAPA 34-010]

a. Constructing, installing or establishing a new stationary source that will cause an increase in regulated pollutant emissions;

b. Making any physical change or change in the operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or

c. Constructing or modifying any pollution control equipment.

Notification of Name Change

G23. The permittee must notify LRAPA in writing, using an LRAPA Application for Administrative Amendment to ACDP form, within 60 days after legal change of the registered name of the company with the Corporation Division of the State of Oregon. [LRAPA 37-0030(4)]

Applicable administrative fees may be required for the name change application.

Permit Renewal

G24. Application for renewal of this permit must be submitted not less than 120 days prior to the permit expiration date for Simple ACDPs, and 180 days prior to the permit expiration date for Standard ACDPs. [LRAPA 37-0040(2)(b)]

G25. A source may not be operated after the expiration date of a permit, unless any of the following occur prior to the expiration date of the permit: [LRAPA 37-0082(1)(a)]

a. A timely and complete application for renewal or reassignment has been submitted; or

b. Another type of permit, ACDP or Title V, has been applied for or issued authorizing the operation of the source.

G26. For a source operating under an ACDP or LRAPA Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated in accordance with the procedures used to establish the requirement initially. [LRAPA 37-0082(1)(c)

G27. Any person who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. [LRAPA 37-0040(4)]

Termination Conditions

G28. This permit terminates upon: [LRAPA 37-0082(2)]

a. Issuance of a renewal, reassigned ACDP or a new ACDP for the same activity or operation;

b. Written request by the permittee to LRAPA requesting termination. If LRAPA determines that a permit is no longer needed, LRAPA will confirm termination in writing to the permittee;

c. Failure to submit a timely and complete application for permit renewal or reassignment as required in section 37-0040. Termination is effective on the permit expiration date; or

d. Failure to pay annual fees within 90 days of the invoice due date as issued by LRAPA, unless prior arrangements for a payment plan have been approved in writing by LRAPA.

G29. If LRAPA determines that a permittee is in noncompliance with the terms of the permit, submitted false information in the application or other required documentation, or is in violation of any applicable rule or statute, LRAPA may revoke the permit. LRAPA will provide notice of the intent to revoke the permit to the permittee under title 31. The notice will include the reasons why the permit will be revoked, and include an opportunity for the permittee to request a contested case hearing prior to the revocation. A written request for hearing must be received by LRAPA within 60 days from service of the notice on the permittee, and must state the grounds of the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and title 14. The permit will continue in effect until the 60th day after service of the notice on the permittee, if the permittee does not timely request a hearing, or until a final order is issued if the permittee timely requests a hearing. [LRAPA 37-0082(5)(a)]

G30. Reinstatement of Terminated Permit [37-0082(4)]

a. A permit subject to termination under Condition G28.c may only be reinstated if, not later than 30 days after the permit expiration date, the permittee submits a complete renewal application and pays a late application fee equivalent to the initial new permitting application fee that would apply if the source was a new source, in which case the existing, expired permit will be reinstated effective as of the permit expiration date and will remain in effect until final action has been taken on the renewal application to issue or deny a permit;

b. A permit terminated under Condition G28.d may only be reinstated if, not later than 90 days after termination, the permittee pays all unpaid annual fees and applicable late fees in which case the existing permit will be reinstated effective on the date of termination; or

c. A terminated permit may only be reinstated as provided in Conditions G30.a. and G30.b. If neither Condition G30.a. and G30.b. apply, the former permittee of a terminated permit who wishes to obtain an ACDP must submit a complete application for a new permit, including paying applicable new source permit application fees and any unpaid annual fees and late fees that were due under the terminated permit. Until LRAPA issues or reassigns a new permit, the source may not operate.

G31. If LRAPA finds there is a serious danger to the public health, safety or the environment caused by a permittee's activities, LRAPA may immediately revoke or refuse to renew the permit without prior notice or opportunity for a hearing. If no advance notice is provided, notification will be provided to the permittee as soon as possible as provided under title 31. The notification will set forth the specific reasons for the revocation or refusal to renew and will provide an opportunity for the permittee to request a contested case hearing for review of the revocation or refusal to renew. A permittee's written request for hearing must be received by LRAPA within 90 days of service of the notice on the permittee and must state the grounds for the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and title 14. The revocation or refusal to renew becomes final without further action by LRAPA if a request for a hearing is not received within 90 days. If a request for a hearing is timely received, the revocation or refusal to renew will remain in place until issuance of a final order. [LRAPA 37-0082(5)(b)]

G32. Any hearing requested must be conducted pursuant to the rules of LRAPA. [LRAPA title 14]

Approval to Construct

G33. The permittee of a source that receives approval to construct or modify must commence construction within 18 months of approval, or other date approved in writing by LRAPA. [LRAPA 34-037(4)]

Construction or modification approval terminates and is invalid for the following reasons: [LRAPA 34-037(4)(a)]

A. Construction or modification is not commenced within 18 months after LRAPA issues such approval, by an alternative deadline established by LRAPA under this section, or by the deadline approved by LRAPA in an extension under paragraph G33.b.;

B. Construction or modification is discontinued for a period of 18 months or more; or

C. Construction or modification is not completed within 18 months of the anticipated date of construction completion included in the application.

b. The permittee may submit a request to extend the construction or modification commencement deadline by submitting a written, detailed explanation of why the source could not commence construction or modification within the initial 18-month period. LRAPA may grant, for good cause, one 18-month construction or modification approval extension. [LRAPA 34-037(4)(b)]

Asbestos

G34. The permittee must comply with the asbestos abatement requirements in title 43 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance. [LRAPA title 43]

Sampling, Testing and Measurement General Requirements

G35. Testing must be conducted in accordance with the DEQ's Source Sampling Manual, the DEQ's Continuous Monitoring Manual, or an applicable EPA Reference Method unless LRAPA (if allowed under applicable federal requirements): [LRAPA 35-0120(3)]

a. Specifies or approves minor changes in methodology in specific cases;

b. Approves the use of an equivalent or alternative method as defined in title 12;

c. Waives the testing requirement because the permittee has satisfied LRAPA that the affected facility is in compliance with applicable requirements; or

d. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors.

G36. LRAPA must be notified of all source sampling projects that are required by LRAPA, including federal requirements that have been delegated to LRAPA by the Environmental Protection Agency (EPA). Unless specified by rule or by permit condition, LRAPA must receive notification at least 30 days in advance of the source test date. Notification may be submitted electronically or by hardcopy, and be accompanied by a source test plan. In addition, LRAPA must be notified of all source sampling projects that are not required by LRAPA if test results are relied upon in permitting a source, used as evidence in an enforcement case, or used to demonstrate compliance with non-delegated federal requirements. [Source Sampling Manual, Vol. 1, November 2018, Section 2.2]

G37. A source test plan must be approved by LRAPA in advance of all source sampling projects that are required by LRAPA, including federal requirements delegated to LRAPA by EPA. If not otherwise specified by rule or permit condition, LRAPA must be provided at least 30 days to review and approve source test plans. The source test plan will be reviewed by LRAPA [Source Sampling Manual, Vol. 1, November 2018, Section 2.3]

G38. For demonstrating compliance with an emission standard, the stack test must successfully demonstrate that a facility is capable of complying with the applicable standard under all normal operating conditions. Therefore, a permittee should conduct the source test while operating under typical worst-case conditions that generate the highest emissions. During the compliance demonstration, new or modified equipment should operate at levels that equal or exceed ninety-percent (90%) of the design capacity. For existing equipment, emission units should operate at levels that equal or exceed ninety-percent (90%) of normal maximum operating rates. Furthermore, the process material(s) and fuel(s) that generate the highest emissions for the pollutant(s) being tested should be used during the testing. Operating requirements for performance tests are often specified by state or federal rule, or by permit condition. [Source Sampling Manual, Vol. 1, November 2018, Section 2.9]

G39. Unless otherwise required by this permit, the permittee must submit all source test reports electronically. [LRAPA 34-015]

Reference Test Methods

G40. Unless otherwise indicated elsewhere in this permit, whenever emission testing is required, the permittee must use the source sampling methods listed in Appendix B or Appendix C of DEQ's Source Sampling Manual. [Source Sampling Manual, Vol. 1, November 2018]

[Revised 06/06/24]

ATTACHMENT A: Air Pollution Emergencies

Table I

AIR POLLUTION EPISODE: ***ALERT CONDITION***

EMISSION REDUCTION PLAN

Part A: Pollution Episode Conditions for Carbon Monoxide or Ozone

For ***Alert Conditions*** due to excessive levels of carbon monoxide or ozone, persons operating motor vehicles shall be requested to voluntarily curtail or eliminate all unnecessary operations within the designated ***Alert Area***, and public transportation systems shall be requested to provide additional services in accordance with a preplanned strategy.

Part B: Pollution Episode Conditions for Particulate Matter

For ***Alert Conditions*** resulting from excessive levels of particulate matter, the following measures shall be taken in the designated area:

1. There shall be no open burning by any person of any material.

2. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 p.m.

12. 3. Persons responsible for the operation of any source of air contaminants listed below shall take all required actions for the ***Alert Level***, in accordance with the preplanned strategy:

Source of Contamination	Control Actions — ***Alert Level***
A. Coal, oil, or wood-fired facilities.	1) Utilization of electric generating fuels having low ash and sulfur content. 2) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. 3) Diverting electric power generation to facilities outside of ***Alert Area***.
B. Coal, oil, or wood-fired process steam generating facilities.	1) Utilization of fuel having low ash and sulfur content. 2) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	3) Substantial reduction of steam load demands consistent with continuing plant operations.

Source of Contamination	Control Actions — ***Alert Level***
C. Manufacturing industries of the following classifications: - Primary Metals Industries - Petroleum Refining - Chemical Industries - Mineral Processing Indus. - Grain Industries - Paper and Allied Products - Wood Processing Industry	1) Reduction of air contaminants from manufacturing operations by curtailing postponing, or deferring production and all operations. 2) Reduction by deferring trade waste disposal operations which emit solid particle gas vapors or malodorous substance. 3) Reduction of heat load demands for processing. 4) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

Table II

AIR POLLUTION EPISODE: ***WARNING CONDITIONS***

EMISSION REDUCTION PLAN

Part A: Pollution Episode Conditions for Carbon Monoxide or Ozone

For ***Warning Conditions***, resulting from excessive levels or carbon monoxide or ozone, the following measures shall be taken:

1. Operation of motor vehicles carrying fewer than three (3) persons shall be prohibited within designated areas during specified hours. Exceptions from this provision are:
    A. Public transportation and emergency vehicles
    B. Commercial vehicles
    C. Through traffic remaining on Interstate or primary highways.

2. At the discretion of the Agency, operations of all private vehicles within designated areas or entry of vehicles into designated areas may be prohibited for specified periods of time.

3. Public transportation operators shall, in accordance with a pre-planned strategy, provide the maximum possible additional service to minimize the public's inconvenience as a result of No. 1 or No. 2. above.

4. For ozone episodes the following additional measures shall be taken:
    A. No bulk transfer of gasoline without vapor recovery from 2:00 a.m. to 2:00 p.m.
    B. No service station pumping of gasoline from 2:00 a.m. to 2:00 p.m.
    C. No operation of paper coating plants from 2:00 a.m. to 2:00 p.m.
    D. No architectural painting or auto finishing;
    E. No venting of dry-cleaning solvents from 2:00 a.m. to 2:00 p.m. (except perchloroethylene).

5. Where appropriate for carbon monoxide episodes during the heating season, and where legal authority exists, governmental agencies shall prohibit all use of wood stoves and fireplaces for

domestic space heating, except where such devices provide the sole source of heat.

Part B: Pollution Episode Conditions for Particulate Matter

For ***Warning Conditions*** resulting from excessive levels of particulate matter, the following measures shall be taken:

1. There shall be no open burning by any person of any material.

2. The use of incinerators for the disposal of solid or liquid wastes shall be prohibited.

3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 p.m.

4. Where legal authority exists, governmental agencies shall prohibit all use of wood stoves and fireplaces for domestic space heating, except where such devices provide the sole source of heat.

5. Persons responsible for the operation of any source of air contaminants listed below shall take all required actions for the ***Warning Level***, in accordance with a preplanned strategy:

Source of Contamination	Control Actions — ***Warning Level***
A. Coal, oil, or wood-fired electric power generating facilities.	1) Maximum utilization of fuels having lowest ash and sulfur content. 2) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. 3) Diverting electric power generation to facilities outside of ***Warning Area***. 4) Prepare to use a plan of action if an ***Emergency Condition*** develops. 5) Cease operation of facilities not related to safety or protection of equipment or delivery of priority power.
B. Coal, oil, or wood-fired process steam generating facilities.	1) Maximum utilization of fuels having the lowest ash and sulfur content. 2) Utilization of mid-day (12: 00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. 3) Prepare to use a plan of action if an ***Emergency Condition*** develops. 4) Cease operation of facilities not related to safety or protection of equipment or delivery of priority power.

Source of Contamination	Control Actions — ***Warning Level***
C. Manufacturing industries which require considerable lead time for shut-down including the following classifications: - Petroleum Refining - Chemical Industries - Primary Metals Industries - Glass Industries - Paper and Allied Products	1) Reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operations. 2) Reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors or malodorous substances. 3) Maximum reduction of heat load demands for processing. 4) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence of boiler lancing or soot blowing.
D. Manufacturing industries which require relatively short time for shut-down.	1) Elimination of air contaminants from manufacturing operations by ceasing, allied operations to the extent possible without causing injury to persons or damage to equipment. 2) Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances. 3) Reduction of heat load demands for processing. 4) Utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

Table III

AIR POLLUTION EPISODE: ***EMERGENCY CONDITIONS***

EMISSION REDUCTION PLAN

1. There shall be no open burning by any person of any material.

2. The use of incinerators for the disposal of solid or liquid wastes shall be prohibited.

3. All places of employment, commerce, trade, public gatherings, government, industry, business, or manufacture shall immediately cease operation, except the following:

    A. Police, fire, medical and other emergency services;

    B. Utility and communication services;

    C. Governmental functions necessary for civil control and safety;

    D. Operations necessary to prevent injury to persons or serious damage to equipment or property;

    E. Food stores, drug stores and operations necessary for their supply;

    F. Operations necessary for evacuation of persons leaving the area;

G. Operations conducted in accordance with an approved preplanned emission reduction plan on file with the Agency.

4. All commercial and manufacturing establishments not included in these rules shall institute such actions as will result in maximum reduction of air contaminants from their operations which emit air contaminants, to the extent possible without causing injury or damage to equipment.

5. The use of motor vehicles is prohibited except for the exempted functions in 3, above.

6. Airports shall be closed to all except emergency air traffic.

7. Where legal authority exists, governmental agencies shall prohibit all use of wood stoves and fireplaces.

8. Any person responsible for the operation of a source of atmospheric contamination listed below shall take all required control actions for this ***Emergency Level***.

Source of Contamination	Control Actions — ***Emergency Level***
A. Coal, oil, or wood-fired electric power generating facilities.	1) Maximum utilization of fuels having lowest ash and sulfur content.
	2) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing. 3) Diverting electric power generation to facilities outside of Emergency area. 4) Cease operation of facilities not related to safety or protection of equipment or delivery of priority power.
B. Coal, oil, or wood-fired steam generating facilities.	1) Reducing heat and steam process demands to absolute necessities consistent with preventing equipment damage. 2) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. 3) Taking the action called for in the emergency plan. 4) Cease operation of facilities not related to safety or protection of equipment or delivery of priority power.
C. Manufacturing industries of the following classifications: - Primary Metals Industry - Petroleum Refining Operations - Chemical Industries - Mineral Processing Industries - Paper and Allied Products - Grain Industry - Wood Processing Industry	1) The elimination of air of contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. 2) Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances. 3) Maximum reduction of heat load demands for processing.

Source of Contamination	Control Actions — ***Emergency Level***
	4) Utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

Lane Regional Air Protection Agency
Simple Air Contaminant Discharge Permit

Review Report

Pacific Recycling, Inc **Permit No. 206460**
3300 Cross Street
Eugene, Oregon 97402
https://pacificrecyclinginc.net/

Source Information:

SIC	5093 – Scrap and Waste Materials
NAICS	423930 - Recyclable Material Merchant Wholesalers
Public Notice Category	Category III

Source Categories (LRAPA Title 37, Table 1)	B.75 - All other sources not listed herein which would have actual emissions, if the source were to operate uncontrolled, of 10 or more tons per year of any single criteria pollutant if located in any part of Lane County

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	N
Emission credits	N
Special Conditions	N
Compliance schedule	N

Source test [date(s)]	N
COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements:

Annual report (due date)	Feb 15
Semi-Annual Report (due date)	N
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)	N
NESHAP (list subparts)	N
Compliance Assurance Monitoring (CAM)	N
Regional Haze (RH)	N
TACT	N
40 CFR part 68 Risk Management	N
Synthetic Minor (SM)	Y
SM-80	N

Title V	N
Major FHAP Source	N
Federal Major Source	N
Type A State New Source Review	N
Type B State New Source Review	N
Prevention of Significant Deterioration (PSD)	N
Nonattainment New Source Review (NNSR)	N

Permittee Identification

1. Pacific Recycling, Inc. ("Pacific Recycling" and/or "the facility") operates a metal shredding and recycling facility at 3300 Cross Street in Eugene, Oregon.

General Background Information

2. Pacific Recycling began operation as an automobile dismantler in 1994. In 2012 Pacific Recycling received a Basic ACDP from LRAPA which allowed the facility to begin automobile shredding. Vehicle shredding began in 2014.

   Pacific Recycling receives End of Life Vehicles (ELVs) and scrap metal for shredding and recycling. All fluids (including fuel, oil, coolant, and refrigerant), batteries, mercury switches, and lead components are removed from ELVs before shredding. The fluids are drained and sent to offsite recycling facilities.

   The facility uses cutting torches to cut larger pieces of material and heavy equipment into smaller pieces that are more manageable. These larger pieces would damage the shredder, so the facility uses cutting torches to process the material. Once processed the material is shipped offsite to another facility for smelting.

   The shredder, material conveying, drop points, storage piles, and fluid draining are all done on a large concrete pad. Vehicle traffic throughout the facility is primarily done on unpaved roads. During the summer, and when it is particularly dry, the facility wets the roads down with water to minimize the fugitive dust being blown offsite. The torch cutting is also performed in a section that is bare earth, which can cause issues with fugitive dust if the torch operator is not careful.

   The metal shredder is manufactured by US Shredder, model 80108, and was manufactured in 2012. The shredder has an estimated throughput capacity of 160 tons per hour, and the facility usually runs the shredder at around 130 tons per hour. The shredder has two (2) electric motors rated at 4,000 horsepower (hp) each and has two (2) water injection pumps. The pumps have adjustable flow rates, and each can operate at 12 to 24 gallons per minute. The water is primarily used to cool the shredder and shredded material, but it also helps reduce particulate matter emissions at the shredder. The moistened material coming from the shredder is also less likely to become airborne while conveyed and dropped into the storage piles. The shredding of automobiles produces a mixture of ferrous metal, non-ferrous metal (e.g. aluminum and copper), and waste called Automotive Shredder Residue (ASR), also known as "fluff".

   After shredding, the components are separated by weight and material type as they are conveyed and dropped at various locations. The drop points use three-sided enclosures to help control wind borne emissions. The ASR waste is stored in piles that are sampled quarterly and the ASR is disposed of in a landfill.

Average Vehicle Weight

3. The 2022 EPA Automotive Trends Report shows that the average vehicle weight for all vehicles from 1975 to 2021 is just under two (2) tons, with the lowest vehicle weights being in the 1980's. The average vehicle weight in 2021 was 4,289 pounds (or 2.14 tons). Prior to shredding, a vehicle usually has various parts removed and the fluids drained. Pacific Recycling has measured the average weight of vehicles being shredded to be around 1.6 tons each. Based on this information, LRAPA will use 1.6 ton per vehicle for emissions calculations.

Reasons for Permit Action and Fee Basis

4. This permit action is a renewal, and change in permit type, for an existing Air Contaminant Discharge Permit (ACDP) which was issued on December 17, 2012 and was originally scheduled to expire on December 17, 2022. The existing permit remains valid until the proposed permit is issued because the facility submitted a timely and complete application for renewal.

   On October 21, 2022, LRAPA informed Pacific Recycling that the facility could no longer be permitted under a "Basic" ACDP and they were required to obtain a "Simple" ACDP since estimated actual emissions were determined to be greater than levels allowed under a Basic ACDP. Specifically, LRAPA determined that Pacific Recycling's operations are more appropriately classified under Title 37, Table 1, Category B.75 since actual emissions of VOCs are estimated to be greater than ten (10) tons/year.

   Based on newly available source test information from similar metal/automobile shredding facilities, Pacific Recycling has the ability to exceed the major source thresholds for VOCs and HAPs if the shredder were operated at its maximum capacity. Pacific Recycling has requested to set PSELs at levels below the major source thresholds in order to obtain a Simple ACDP.

Attainment Status

5. The facility is located in an area that has been designated as attainment or unclassified for all criteria pollutants. The facility is inside the Eugene-Springfield UGB as defined in LRAPA 29-0010 which designates the Eugene-Springfield CO and PM_{10} maintenance areas. The facility is also located inside the Eugene-Springfield UGB as described in the current Eugene-Springfield Metropolitan Area General Plan, as amended.

Permitting History

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

Date(s) Approved/Valid	Permit Action Type	Description
12/17/2012 – 12/17/2022	Basic ACDP	Initial permit
Upon Issuance	Simple ACDP	Renewal and change permit type

Emission Unit Description

7. The emission units (EUs) regulated by this permit are the following:

EU ID	Emission Unit (EU)	Control Device
EU1	Metal Shredder	NA
EU2	Material Conveying & Dropping	3-sided enclosures
EU3	Storage Piles	3-sided enclosures

EU ID	Emission Unit (EU)	Control Device
EU4	Automobile Fluid Draining	NA
EU5	Torch Cutting	NA
EU6	Unpaved Road Emissions	Work Practices

Significant Emission Units

8. Emission Unit EU1 – Metal Shredder
The metal shredder is powered by two (2) electric motors and has two (2) water injectors used to cool the shredder head and the material being shredded. Emission factors (EFs) for the shredder were developed by looking at source tests from other similar metal/automobile shredding facilities. The other shredder facilities had similarly sized shredders and also used water injection for cooling. The VOC emission factors specifically came from a linear equation provided by EPA based on shredder source tests. Rather than use a formula based on the ratio of automobiles shredded to non-automobile metal shredded, LRAPA has asked Pacific Recycling to track and report the weight of automobiles shredded and non-automobile metal shredded, and to calculate the VOC emissions based on EFs for 100% automobile and 0% automobile shredding. The highest emission factor across all applicable source tests was chosen for each pollutant.

9. Emission Unit EU2 – Conveying and Dropping
Pacific Recycling has a large bulk handling system that takes the shredded materials and sorts them into their various components. There are multiple conveyor-to-conveyor drops, as well as final drop points. Some of the drop points are into 3-sided enclosures, which help reduce air entrainment emissions as the materials drop, and also help reduce airborne emissions from the resulting storage piles. The emissions from all the conveying drops are calculated based on samples of ASR storage pile composition, the percent of ASR at each drop point, the moisture content of the material, local wind averages, and if the final drop was into a 3-sided enclosure.

10. Emission Unit EU3 – Storage Piles
The storage pile emissions are based on samples taken from ASR to determine the composition. Then the composition is ratioed to the percent of ASR expected for each pile, the maximum exposed surface area (based on footprint and height), local wind and moisture averages, and if it is within a 3-sided enclosure.

11. Emission Unit EU4 – Fluid Draining
Pacific Recycling removes the automotive fluids prior to shredding. The draining emissions are based on the average amount of gasoline contained in a vehicle, the volatile components of gasoline, and the volatility of gasoline in air at standard temperature and pressure.

12. Emission Unit EU5 – Cutting Torches
The torch cutting particulate emission factors are from a report prepared by Pacific Environmental Services in May 2000 for the South Coast Air Quality Management District (AQMD) and the California Air Resources Board (CARB).

13. Emission Unit EU6 – Unpaved Roads
The road dust calculations are based on EPA AP-42 Chapter 13.2.2 Unpaved Roads. This takes into account the road composition, size and weight of the average vehicle traveling the roads, local average moisture, average miles traveled, and if the road is treated with water to reduce airborne particles.

Nuisance, Deposition and Other Emission Limitations

14. Under LRAPA 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. A plant representative must immediately investigate the condition following the receipt of a nuisance complaint and provide a response to the complainant within 24 hours, if possible, Nuisance conditions will be verified by LRAPA personnel. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

15. Under LRAPA 32-055, the permittee must not cause or allow the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

16. Under LRAPA 32-090(1), the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

Emission Limitations

17. The facility is subject to the general requirements for fugitive emissions under LRAPA 48-015. The facility must not have visible emissions that leave the plant site boundary 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). Compliance will be demonstrated through a survey of facility fugitive emissions using EPA Method 22 to be completed at least once a week. The permittee is required to take corrective action if any visible emissions are identified. If requested by LRAPA, the facility must develop a fugitive emission control plan.

18. The control equipment at the facility must be operated and maintained at the highest and best practicable treatment and control of air contaminant emissions so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction, odors, soiling, and other deleterious factors at the lowest possible levels under LRAPA 32-005(1). Compliance for the control equipment at the facility will be demonstrated through implementation of an Operation & Maintenance (O&M) Plan.

Asbestos

19. The asbestos requirements in LRAPA title 43 require that all asbestos records be retained for at least two (2) years. This requirement is superseded by the ACDP record retention requirements under LRAPA 34-016(6). Therefore, the facility is required to retain all asbestos documentation onsite for at least five (5) years.

Typically Achievable Control Technology (TACT)

20. LRAPA 32-008(2) requires new units installed or existing emission units modified on or after January 1, 1994, meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR in title 38, Type A State NSR in LRAPA title 38, an applicable Standard of Performance for New Stationary Sources in title 46, or any other standard applicable only to new or

modified sources in title 32, title 33, or title 39 for the regulated pollutant emitted; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

While a formal TACT analysis has not been conducted, LRAPA believes that the metal shredder is likely meeting TACT as long as the facility:

a. Uses the water injection system on the shredder at all times the shredder is operating, in accordance with the manufacturing specifications;

b. Drains all fluids from automobiles prior to shredding; and

c. Removes all batteries, mercury switches, and lead from automobiles prior to shredding.

New Source Performance Standards (NSPSs)

21. There are no emissions units at this facility for which NSPS have been promulgated or are applicable.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

22. There are no emissions units at this facility for which NESHAPs have been promulgated.

Plant Site Emission Limits (PSELs) Information

23. Below is a summary of the baseline emissions rate, netting basis, and PSELs for this facility:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis: Proposed (TYP)	Plant Site Emission Limit (PSEL): Proposed (TPY)	PSEL Increase Over Netting Basis (TPY)	Significant Emission Rate (TPY)
PM	NA	0	11	11	25
PM_{10}	NA	0	4.6	4.6	15
$PM_{2.5}$	NA	0	1.9	1.9	10
CO	NA	0	de minimis	NA	100
NO_X	NA	0	de minimis	NA	40
SO_2	NA	0	de minimis	NA	40
VOC	NA	0	39	39	40
GHG	NA	0	de minimis	NA	75,000

a. Previously, Pacific Recycling was on a Basic ACDP, and Basic ACDPs do not have a Baseline Emission Rate, Netting Basis or PSEL.

b. With the exception of GHG and $PM_{2.5}$, the facility does not have a baseline emission rate (BER) for criteria pollutants because the facility was not in operation during either the 1977 or 1978 baseline year. The GHG BER is based on any consecutive 12 calendar month period during calendar years 2000 through 2010 in accordance with LRAPA 42-0048(a)(b), but the facility did not request a GHG BER to be set. A BER was not established for $PM_{2.5}$ in accordance with LRAPA 42-0048(3).

c. Based on newly available source test information from similar metal/automobile shredding facilities, the facility has the ability to exceed the major source thresholds for VOCs and HAPs if the shredder were operated at its capacity. Pacific Recycling has elected to set PSELs at levels below the major source and SER thresholds, which allows them to qualify for a Simple ACDP. The proposed PSELs for all pollutants are equal to the facility's potential to emit or capacity in accordance with LRAPA 42-0041(2). The netting basis is zero in accordance with 42-0046(4).

d. PSELs for CO, NO_X, SO_2, and GHGs are not included in this permit since emissions of these pollutants are less than the respective de minimis emission thresholds under title 12.

e. There are no assigned HAP PSELs because the HAP emissions are tied to the VOC emissions. At their chosen VOC PSEL, Pacific Recycling's potential to emit is below the nine (9) and 24 ton limits for HAPs, individual and aggregate respectively, to obtain HAP PSELs. See the Federal Hazardous Air Pollutants (HAP) and Toxic Air Contaminants (TACs) section of this review report for more information related to HAPs.

f. The PSEL is a federally enforceable limit on the potential to emit.

Unassigned Emissions and Emission Reduction Credits

24. The facility has zero (0) unassigned emissions. 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.

Type A and Type B State NSR

25. The proposed permit type change from Basic to Simple ACDP did not increase the PSEL over the netting basis of any pollutant above the SER and therefore, the facility is not subject to Type A or Type B State NSR for either a nonattainment or designated area under LRAPA 38-0010(2)(d).

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

26. This facility is located in an area that is designated attainment or unclassified for all regulated pollutants other than CO and PM_{10}. For pollutants other than CO and PM_{10}, 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 PM_{10}, the source is located in a maintenance area. The proposed PSELs for CO and PM_{10} are less than the 100 TPY threshold that determines the applicability of Major NSR in a maintenance area.

Federal Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants (TACs)

27. Potential annual federal hazardous air pollutant emissions (HAP) are based on the potential to emit of the facility operating under permit limitations. The potential emissions of federal HAPs are below the major source thresholds of 10 TPY of any single federal HAP and 25 TPY for the aggregate of federal HAPs.

Pacific Recycling has chosen to limit their PTE to levels below the major source threshold for HAPs in order to obtain a Simple ACDP. At their chosen PTE, the maximum potential emission of a single federal HAP is 4.25 tons per year (xylenes), and the potential aggregate of federal HAP emissions are 12.54 tons per year. The facility is considered a synthetic minor source of federal HAPs.

28. 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 (TACs). In 2016 and again in 2020, LRAPA required the reporting of approximately 600 toxic air contaminants. LRAPA regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All 187 Federally listed hazardous air pollutants (HAPs) are on the list of approximately 600 toxic air contaminants. Pacific Recycling was on a Basic ACDP during the previous air toxic reporting periods and was not subject to the same air toxic reporting requirements. When the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce their risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially on the ATEI.

29. The hazardous air pollutants and toxic air contaminants listed below are the projected maximum potential HAP/TAC emissions from the facility at the chosen PTE, based on emission factors derived from source testing of similar facilities.

CAS/DEQ ID	Pollutant	PTE (ton/yr)	Federal HAP	CAO TAC
1330-20-7	Xylenes (mixed)	4.25	Y	Y
108-88-3	Toluene	3.39	Y	Y
540-84-1	2,2,4-Trimethylpentane	1.86	Y	Y
110-54-3	Hexane	1.37	Y	Y
100-41-4	Ethyl benzene	0.84	Y	Y
71-43-2	Benzene	0.47	Y	Y
67-56-1	Methanol	0.12	Y	Y
7440-66-6	Zinc	0.077	N	Y
88-06-2	2,4,6-Trichlorophenol	0.040	Y	Y
100-42-5	Styrene	0.031	Y	Y
7439-97-6	Mercury	0.022	Y	Y
75-09-2	Methylene chloride	0.021	Y	Y
98-82-8	Cumene	0.020	Y	Y
71-55-6	Methyl chloroform	0.017	Y	Y
78-93-3	2-Butanone	0.014	N	Y
127-18-4	Perchloroethylene	0.014	Y	Y
1336-36-3	Polychlorinated biphenyls (PCBs)	0.013	Y	Y
7439-92-1	Lead and compounds	0.013	Y	Y
365	Nickel compounds, insoluble	0.013	Y	Y
108-10-1	Methyl isobutyl ketone	8.37E-03	Y	Y
7440-50-8	Copper and compounds	8.22E-03	N	Y
79-01-6	Trichloroethylene	5.81E-03	Y	Y

CAS/DEQ ID	Pollutant	PTE (ton/yr)	Federal HAP	CAO TAC
106-99-0	1,3-Butadiene	5.68E-03	Y	Y
91-20-3	Naphthalene	3.00E-03	Y	Y
75-35-4	Vinylidene chloride	2.32E-03	Y	Y
7439-96-5	Manganese	2.25E-03	Y	Y
18540-29-9	Chromium VI	2.15E-03	Y	Y
7429-90-5	Aluminum	1.68E-03	N	Y
7440-43-9	Cadmium	1.44E-03	Y	Y
75-34-3	1,1-Dichloroethane	1.16E-03	Y	Y
504	Phosphorus	7.85E-04	Y	Y
7440-39-3	Barium	6.88E-04	N	Y
75-01-4	Vinyl chloride	3.00E-04	Y	Y
7782-49-2	Selenium	1.31E-04	Y	Y
74-83-9	Bromomethane	1.13E-04	Y	Y
7440-22-4	Silver	1.10E-04	N	Y
7440-36-0	Antimony	7.63E-05	Y	Y
447	Polybrominated diphenyl ethers (PBDEs)	3.73E-05	N	Y
7440-38-2	Arsenic	3.39E-05	Y	Y
7440-48-4	Cobalt	3.25E-05	Y	Y
7440-28-0	Thallium	2.54E-05	N	Y
401	Polycyclic aromatic hydrocarbons (PAHs)	6.39E-06	Y	Y
7440-41-7	Beryllium	6.38E-06	Y	Y
117-81-7	Bis(2-ethylhexyl) phthalate (DEHP)	1.77E-06	Y	Y
118-74-1	Hexachlorobenzene	2.35E-07	Y	Y
645	Polychlorinated biphenyls (PCBs) TEQ	2.28E-08	Y	Y
646	PCDDs & PCDFs TEQ	1.56E-09	Y	Y
		Total (ton/yr)	**12.54**	**12.64**

Toxics Release Inventory

30. The Toxics Release Inventory (TRI) is a 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.

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. For calendar year 2022, this facility did not report to the TRI program.

Compliance History

31. The facility inspection and compliance history is listed in the table below:

Type of Inspection	Date	Results
Informational Inspection – Follow up to NCP 15-3587	07/27/2016	Not In compliance: Fugitive Emissions - Crusher
Informational Inspection	08/17/2016	On Schedule: Fugitive Emissions
Informational Inspection	11/08/2016	On Schedule: Other
Informational Inspection	01/05/2018	Not In compliance: Fugitive Emissions - Trackout
Informational Inspection	08/30/2018	In compliance: Other
Informational Inspection	09/13/2018	In compliance: Other
Maintenance of Compliance	01/11/2019	On Schedule: Fugitive Emissions
Maintenance of Compliance	03/25/2022	Not In compliance: Outdoor Burning Limits
Informational Inspection	06/10/2022	On Schedule: Fugitive Emissions

32. On September 5, 2007, Pacific Recycling was issued a Notice of Non-Compliance (NON 2809) for open burning of prohibited materials (plastics, rubber, grease, hydraulic fluid); open burning when prohibited; open burning where prohibited; and commercial open burning where prohibited.

On October 24, 2007, LRAPA issued a Notice of Civil Penalty (NCP 07-2809) in the amount of $700.

On December 14, 2007 LRAPA issued a Default Order Judgement (DOJ 07-2809) with a lien filed with Lane County in the amount of $700. The full amount was paid on December 28, 2007 and the lien was removed.

33. On February 22, 2011, Pacific Recycling was issued a Notice of Non-Compliance (NON 3278) for open burning of prohibited materials; open burning within the Eugene city limits; failure to take reasonable precautions to prevent particulate matter from becoming airborne from unpaved roads and other surfaces which can create airborne dusts; and failure to promptly remove from paved streets earth or other material which does or may become airborne.

    On March 01, 2011, LRAPA issued a Notice of Civil Penalty (NCP 11-3278) in the amount of $625. The facility requested a reduction and the fee was reduced to $375.

    On April 11, 2011 LRAPA issued a Stipulated Final Order (SFO 11-3278) in the amount of $375. The full amount was paid on April 18, 2011, and the action was closed.

34. On June 27, 2011, Pacific Recycling was issued a Notice of Non-Compliance (NON 3305) for open burning of prohibited materials (rubber hosing).

    On July 19, 2011, LRAPA issued a Notice of Civil Penalty (NCP 11-3305) in the amount of $1,000. The full amount was paid on August 26, 2011, and the action was closed.

35. On July 08, 2011, Pacific Recycling was issued a Notice of Non-Compliance (NON 3309) for open burning of prohibited materials (rubber hosing).

    On August 24, 2011, LRAPA issued a Notice of Civil Penalty (NCP 11-3309) in the amount of $1,188. The full amount was paid on September 20, 2011, and the action was closed.

36. On July 27, 2011, Pacific Recycling was issued a Notice of Non-Compliance (NON 3317) for causing, allowing, initiating or maintaining the open burning of prohibited materials.

    On December 01, 2011, LRAPA issued a Notice of Civil Penalty (NCP 11-3317) in the amount of $1,250. The full amount was paid on December 09, 2011, and the action was closed.

37. On November 07, 2012, Pacific Recycling was issued a Notice of Non-Compliance (NON 3405) for failure to take reasonable precautions to prevent particulate matter from becoming airborne; and failure to promptly remove trackout from Pacific Recycling activities on Meadow Lane, Davis Street and Cross Street in Eugene.

    On November 29, 2012, LRAPA issued a Notice of Civil Penalty (NCP 12-3405) in the amount of $938. The full amount was paid on December 12, 2012, and the action was closed.

38. On March 07, 2013, Pacific Recycling was issued a Notice of Non-Compliance (NON 3417) for failure to take reasonable precautions to prevent particulate matter from becoming airborne; and failure to promptly remove trackout from Pacific Recycling activities on Meadow Lane, Davis Street and Cross Street in Eugene.

    On March 27, 2013, LRAPA issued a Notice of Civil Penalty (NCP 13-3417) in the amount of $938. The full amount was paid on April 16, 2013, and the action was closed.

39. On March 22, 2013, Pacific Recycling was issued a Notice of Non-Compliance (NON 3426) for failure to take reasonable precautions to prevent particulate matter from becoming airborne; and failure to promptly remove trackout from Pacific Recycling activities on Meadow Lane, Davis Street and Cross Street in Eugene.

40. On April 24, 2013, Pacific Recycling was issued a Notice of Non-Compliance (NON 3443) for unapproved open burning; open burning of prohibited materials; and open burning where prohibited.

On May 10, 2013, LRAPA issued a Notice of Civil Penalty (NCP 13-3443) in the amount of $1,438. The full amount was paid on May 16, 2013, and the action was closed.

41. On January 03, 2014, Pacific Recycling was issued a Notice of Non-Compliance (NON 3494) for failure to take reasonable precautions to prevent particulate matter from becoming airborne; and failure to promptly remove trackout from Pacific Recycling activities on Meadow Lane, Davis Street and Cross Street in Eugene.

    On January 16, 2014, LRAPA issued a Notice of Civil Penalty (NCP 13-3494) in the amount of $1,563. The facility requested a reduction and the fee was reduced to $938.

    On February 25, 2014 LRAPA issued a Stipulated Final Order (SFO 13-3494) in the amount of $938. The full amount was paid on April 18, 2011, and the action was closed

42. On July 09, 2015, Pacific Recycling was issued a Notice of Non-Compliance (NON 3587) for failure to take reasonable precautions to prevent particulate matter from becoming airborne from metal shredder materials handling operations and shredder infeed.

43. On September 29, 2015, LRAPA issued a Notice of Civil Penalty (NCP 15-3587) in the amount of $1,500. The facility filled Chapter 11 bankruptcy and the action was closed.

Source Testing History

44. The facility is not required to conduct source testing at this time. LRAPA is not aware of any historical source testing conducted at this facility.

Recordkeeping Requirements

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

Facility-Wide Activity	Parameter	Units	Minimum Recording Frequency
Automobiles Shredded	Material Processed	Tons of Autos	Monthly
Non-Automobile Metal Shredded	Material Processed	Tons of Non-Auto Metal	Monthly
Total Shredder Throughput	Material Processed	Tons	Monthly
Unpaved Roads	Number of Vehicles	Number	Monthly
Torch Cutting	Hours of Cutting	Hours	Monthly
Asbestos Records (Surveys, Abatement Notifications, Abatement Certifications, and Asbestos Waste Shipments) in accordance with Condition 13	NA	NA	Documentation
Certification for the removal of conditioning coolant in accordance with Condition 14	NA	NA	Documentation

Facility-Wide Activity	Parameter	Units	Minimum Recording Frequency
Recovery and recycling equipment operation in accordance with Condition 15	NA	NA	Certification
General Recordkeeping			
Log of nuisance complaints	NA	NA	Upon receipt of complaint
Visible Emission Survey	Opacity	Percent	Monthly
Operation and Maintenance Plan	NA	NA	Maintain current version on-site
Standard Operating Procedure	NA	NA	Maintain current version on-site
Upset Log of all planned and unplanned excess emissions, as required by Condition G15	NA	NA	Per occurrence

Reporting Requirements

46. 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
PSEL pollutant emissions as calculated according to Conditions 5 and 6, including supporting calculations.	Annual	February 15
Shredder throughput (Automobiles, Non-Automobile Metal, Total Shredder Throughput) according to Condition 6.	Annual	February 15
Number of vehicles for unpaved road emissions according to Condition 6.	Annual	February 15
Hours of torch cutting according to Condition 6.	Annual	February 15
A summary of maintenance and repairs performed on any pollution control devices at the facility.	Annual	February 15
A summary of all complaints received by the permittee and their resolution as required by Condition G11.	Annual	February 15
The excess emissions log required by Condition G16, if any planned or unplanned excess emissions have occurred during the reporting period.	Annual	February 15

GHG Reporting

47. The permittee is not subject to greenhouse gas reporting under OAR 340 Division 215 because actual greenhouse gas emissions are less than 2,500 metric tons (2,756 short tons) of CO2 equivalents per year. If the source ever emits more than this amount, they will be required to report greenhouse gas emissions.

Public Notice

48. Issuance of a renewed Simple Air Contaminant Discharge Permit requires public notice in accordance with LRAPA 31-0030(3)(c), which requires LRAPA to provide notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments.

    The proposed permit was on public notice from May 24, 2024 to June 28, 2024. No written comments were submitted during the public comment period. No public hearing was requested by ten (10) or more individuals or an individual representing a group of more than ten (10) individuals.

CNC/AA
07/08/2024

Emission Detail Sheets:

			Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
			Tons shredded	111,826	93,107	91,851	70,281	93,085	102,608	78,449	22,610	13,642
			No. of autos	33,740	14,482	23,269	10,382	12,809	34,601	36,532	5,024	3,188
			(Tons of Autos)	53,984	23,171	37,230	16,611	20,494	55,362	58,451	8,038	5,101
			(Tons of non-Autos)	57,842	69,936	54,621	53,670	72,591	47,246	19,998	14,572	8,541
Emissions from Shredding			% Autos by mass	48%	25%	41%	24%	22%	54%	75%	36%	37%
Pollutant	**EF Source**	**EF (lb/ton)**			(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
PM	Reference 1	0.0137		0.76	0.64	0.63	0.48	0.64	0.70	0.54	0.15	0.09
PM_{10}	Reference 1	0.0137		0.76	0.64	0.63	0.48	0.64	0.70	0.54	0.15	0.09
$PM_{2.5}$	Reference 1	0.0137		0.76	0.64	0.63	0.48	0.64	0.70	0.54	0.15	0.09
VOC - from **Autos** shredded	Reference 2	0.5730		15.47	6.64	10.67	4.76	5.87	15.86	16.75	2.30	1.46
VOC - from **Non-Auto Metal** shredded	Reference 2	0.2520		7.29	8.81	6.88	6.76	9.15	5.95	2.52	1.84	1.08
Total HAPs	Reference 3	0.1381		7.72	6.43	6.34	4.85	6.43	7.09	5.42	1.56	0.94
Individual Hazardous Air Pollutants	CAS	**EF (lb/ton)**										
Antimony and compounds	7440-36-0	8.76E-07		4.9E-05	4.1E-05	4.0E-05	3.1E-05	4.1E-05	4.5E-05	3.4E-05	9.9E-06	6.0E-06
Arsenic and compounds	7440-38-2	3.50E-07		2.0E-05	1.6E-05	1.6E-05	1.2E-05	1.6E-05	1.8E-05	1.4E-05	4.0E-06	2.4E-06
Barium and compounds	7440-39-3	7.82E-06		4.4E-04	3.6E-04	3.6E-04	2.7E-04	3.6E-04	4.0E-04	3.1E-04	8.8E-05	5.3E-05
Beryllium and compounds	7440-41-7	7.32E-08		4.1E-06	3.4E-06	3.4E-06	2.6E-06	3.4E-06	3.8E-06	2.9E-06	8.3E-07	5.0E-07
Cadmium and compounds	7440-43-9	1.65E-05		9.2E-04	7.7E-04	7.6E-04	5.8E-04	7.7E-04	8.5E-04	6.5E-04	1.9E-04	1.1E-04
Chromium VI, chromate and dichromate particulate	18540-29-9	1.65E-05		9.2E-04	7.7E-04	7.6E-04	5.8E-04	7.7E-04	8.5E-04	6.5E-04	1.9E-04	1.1E-04
Cobalt and compounds	7440-48-4	3.19E-07		1.8E-05	1.5E-05	1.5E-05	1.1E-05	1.5E-05	1.6E-05	1.3E-05	3.6E-06	2.2E-06
Copper and compounds	7440-50-8	7.72E-06		4.3E-04	3.6E-04	3.5E-04	2.7E-04	3.6E-04	4.0E-04	3.0E-04	8.7E-05	5.3E-05
Lead and compounds	7439-92-1	1.17E-04		6.5E-03	5.4E-03	5.4E-03	4.1E-03	5.4E-03	6.0E-03	4.6E-03	1.3E-03	8.0E-04
Manganese and compounds	7439-96-5	1.19E-05		6.7E-04	5.6E-04	5.5E-04	4.2E-04	5.6E-04	6.1E-04	4.7E-04	1.3E-04	8.1E-05
Mercury and compounds	7439-97-6	2.48E-04		1.4E-02	1.2E-02	1.1E-02	8.7E-03	1.2E-02	1.3E-02	9.7E-03	2.8E-03	1.7E-03
Nickel compounds, insoluble	365	4.41E-06		2.5E-04	2.1E-04	2.0E-04	1.5E-04	2.1E-04	2.3E-04	1.7E-04	5.0E-05	3.0E-05
Phosphorus and compounds	504	9.01E-06		5.0E-04	4.2E-04	4.1E-04	3.2E-04	4.2E-04	4.6E-04	3.5E-04	1.0E-04	6.1E-05
Selenium and compounds	7782-49-2	1.50E-06		8.4E-05	7.0E-05	6.9E-05	5.3E-05	7.0E-05	7.7E-05	5.9E-05	1.7E-05	1.0E-05
Thallium and compounds	7440-28-0	2.92E-07		1.6E-05	1.4E-05	1.3E-05	1.0E-05	1.4E-05	1.5E-05	1.1E-05	3.3E-06	2.0E-06
Silver and compounds	7440-22-4	1.27E-06		7.1E-05	5.9E-05	5.8E-05	4.4E-05	5.9E-05	6.5E-05	5.0E-05	1.4E-05	8.6E-06
Zinc and compounds	7440-66-6	8.43E-04		4.7E-02	3.9E-02	3.9E-02	3.0E-02	3.9E-02	4.3E-02	3.3E-02	9.5E-03	5.7E-03
1,1-Dichloroethane (Ethylidene dichloride)	75-34-3	1.33E-05		7.4E-04	6.2E-04	6.1E-04	4.7E-04	6.2E-04	6.8E-04	5.2E-04	1.5E-04	9.1E-05
Benzene	71-43-2	4.61E-03		2.6E-01	2.1E-01	2.1E-01	1.6E-01	2.1E-01	2.4E-01	1.8E-01	5.2E-02	3.1E-02
Ethyl benzene	100-41-4	9.51E-03		5.3E-01	4.4E-01	4.4E-01	3.3E-01	4.4E-01	4.9E-01	3.7E-01	1.1E-01	6.5E-02
Hexane	110-54-3	1.42E-02		7.9E-01	6.6E-01	6.5E-01	5.0E-01	6.6E-01	7.3E-01	5.6E-01	1.6E-01	9.7E-02
Bromomethane (Methyl bromide)	74-83-9	1.30E-06		7.3E-05	6.0E-05	6.0E-05	4.6E-05	6.0E-05	6.7E-05	5.1E-05	1.5E-05	8.8E-06
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	2.00E-04		1.1E-02	9.3E-03	9.2E-03	7.0E-03	9.3E-03	1.0E-02	7.8E-03	2.3E-03	1.4E-03
2-Butanone (Methyl ethyl ketone)	78-93-3	1.62E-04		9.1E-03	7.5E-03	7.4E-03	5.7E-03	7.5E-03	8.3E-03	6.4E-03	1.8E-03	1.1E-03
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	9.61E-05		5.4E-03	4.5E-03	4.4E-03	3.4E-03	4.5E-03	4.9E-03	3.8E-03	1.1E-03	6.6E-04
Dichloromethane (Methylene chloride)	75-09-2	2.37E-04		1.3E-02	1.1E-02	1.1E-02	8.3E-03	1.1E-02	1.2E-02	9.3E-03	2.7E-03	1.6E-03
Naphthalene	91-20-3	3.44E-05		1.9E-03	1.6E-03	1.6E-03	1.2E-03	1.6E-03	1.8E-03	1.3E-03	3.9E-04	2.3E-04
Styrene	100-42-5	3.59E-04		2.0E-02	1.7E-02	1.6E-02	1.3E-02	1.7E-02	1.8E-02	1.4E-02	4.1E-03	2.4E-03
Tetrachloroethene (Perchloroethylene)	127-18-4	1.59E-04		8.9E-03	7.4E-03	7.3E-03	5.6E-03	7.4E-03	8.2E-03	6.2E-03	1.8E-03	1.1E-03
Toluene	108-88-3	3.76E-02		2.1E+00	1.7E+00	1.7E+00	1.3E+00	1.7E+00	1.9E+00	1.5E+00	4.2E-01	2.6E-01
Trichloroethene (TCE, Trichloroethylene)	79-01-6	6.67E-05		3.7E-03	3.1E-03	3.1E-03	2.3E-03	3.1E-03	3.4E-03	2.6E-03	7.5E-04	4.5E-04
Vinyl Chloride	75-01-4	3.44E-06		1.9E-04	1.6E-04	1.6E-04	1.2E-04	1.6E-04	1.8E-04	1.3E-04	3.9E-05	2.3E-05
Vinylidene chloride	75-35-4	2.67E-05		1.5E-03	1.2E-03	1.2E-03	9.4E-04	1.2E-03	1.4E-03	1.0E-03	3.0E-04	1.8E-04
Xylene (mixture), including m-xylene, o-xylene, p-xyle	1330-20-7	4.83E-02		2.7E+00	2.2E+00	2.2E+00	1.7E+00	2.2E+00	2.5E+00	1.9E+00	5.5E-01	3.3E-01
Polychlorinated biphenyls (PCBs)	1336-36-3	1.51E-04		8.4E-03	7.0E-03	6.9E-03	5.3E-03	7.0E-03	7.7E-03	5.9E-03	1.7E-03	1.0E-03
Polychlorinated biphenyls (PCBs) TEQ	645	2.61E-10		1.5E-08	1.2E-08	1.2E-08	9.2E-09	1.2E-08	1.3E-08	1.0E-08	3.0E-09	1.8E-09
Polychlorinated dibenzo-p-dioxins (PCDDs) & dibenzof	646	1.74E-11		9.7E-10	8.1E-10	8.0E-10	6.1E-10	8.1E-10	8.9E-10	6.8E-10	2.0E-10	1.2E-10
1,3-Butadiene	106-99-0	6.53E-05		3.6E-03	3.0E-03	3.0E-03	2.3E-03	3.0E-03	3.3E-03	2.6E-03	7.4E-04	4.5E-04
2,2,4-Trimethylpentane	540-84-1	2.04E-02		1.1E+00	9.5E-01	9.4E-01	7.2E-01	9.5E-01	1.0E+00	8.0E-01	2.3E-01	1.4E-01
Cumene	98-82-8	2.25E-04		1.3E-02	1.0E-02	1.0E-02	7.9E-03	1.0E-02	1.2E-02	8.8E-03	2.5E-03	1.5E-03
Methanol	67-56-1	1.41E-03		7.9E-02	6.6E-02	6.5E-02	5.0E-02	6.6E-02	7.2E-02	5.5E-02	1.6E-02	9.6E-03
Total HAPs		**1.38E-01**		**7.72**	**6.43**	**6.34**	**4.85**	**6.43**	**7.09**	**5.42**	**1.56**	**0.94**

References:

Reference 1: Average of Metal Shredder Stack Tests (Greenfield MA - wTe Recycling, November 18-20, 2015; SMM New England Corporation Johnston, RI, April 26, 2018; MN NorMet2017. https://www.pca.state.mn.us/air/northern-metals-shredder-building-test-results; ISRI Title V Applicability Workbook, 1998 Edition Table D10-F; Capitol City Metals 2005; General Iron, Chicago, IL, May 25, 2018

Reference 2: Source tests, Schnitzer Steel October 2018

Reference 3: The HAPs EFs were the highest EF from the following six source tests and references: General Iron, Chicago, IL, May 25, 2018; Northern Metals July-August 2017 Stack Test Data and MN Technical Support Document for Draft Air Emission Permit No. 14100076-101; Greenfield MA - wTe Recycling, November 18-20, 2015, SMM New England Corporation Johnston, RI April 26, 2018; ISRI Title V Applicability Workbook, 1998 Edition Table D10-F; Schnitzer Steel Compilation, October 2019 Foulweather Consulting Report, 100% Autos

Reference 3: The HAPs EFs were the highest EF from the following six source tests and references:

- Northern Metals July-August 2017 Stack Test Data and MN Technical Support Document for Draft Air Emission Permit No. 14100076-101
- Greenfield MA - wTe Recycling, November 18-20, 2015
- SMM New England Corporation Johnston, RI April 26, 2018
- ISRI Title V Applicability Workbook, 1998 Edition Table D10-F
- Schnitzer Steel Compilation, October 2019 Foulweather Consulting Report, 100% Autos

Emissions from ASR/Fluff conveying

Pollutant	EF (lb/ton)
PM	0.025
PM_{10}	0.012
$PM_{2.5}$	0.0018
VOC	0.00079

Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
PM	1.39	1.16	1.14	0.87	1.16	1.27	0.97	0.28	0.17
PM_{10}	0.66	0.55	0.54	0.41	0.55	0.60	0.46	0.13	0.08
$PM_{2.5}$	0.10	0.08	0.08	0.06	0.08	0.09	0.07	0.02	0.01
VOC	0.04	0.04	0.04	0.03	0.04	0.04	0.03	0.01	0.01

Pollutant	CAS	max PPM	EF (lb/ton)	2023	2022	2021	2020	2019	2018	2017	2016	2015
Aluminum and compounds	7429-90-5	7870	1.66E-05	9.3E-04	7.7E-04	7.6E-04	5.8E-04	7.7E-04	8.5E-04	6.5E-04	1.9E-04	1.1E-04
Arsenic and compounds	7440-38-2	16	3.37E-08	1.9E-06	1.6E-06	1.5E-06	1.2E-06	1.6E-06	1.7E-06	1.3E-06	3.8E-07	2.3E-07
Barium and compounds	7440-39-3	34.5	7.26E-08	4.1E-06	3.4E-06	3.3E-06	2.6E-06	3.4E-06	3.7E-06	2.8E-06	8.2E-07	5.0E-07
Cadmium and compounds	7440-43-9	25.4	5.35E-08	3.0E-06	2.5E-06	2.5E-06	1.9E-06	2.5E-06	2.7E-06	2.1E-06	6.0E-07	3.6E-07
Cobalt and compounds	7440-48-4	21.9	4.61E-08	2.6E-06	2.1E-06	2.1E-06	1.6E-06	2.1E-06	2.4E-06	1.8E-06	5.2E-07	3.1E-07
Copper and compounds	7440-50-8	35360	7.45E-05	4.2E-03	3.5E-03	3.4E-03	2.6E-03	3.5E-03	3.8E-03	2.9E-03	8.4E-04	5.1E-04
Lead and compounds	7439-92-1	11600	2.44E-05	1.4E-03	1.1E-03	1.1E-03	8.6E-04	1.1E-03	1.3E-03	9.6E-04	2.8E-04	1.7E-04
Manganese and compounds	7439-96-5	547	1.15E-06	6.4E-05	5.4E-05	5.3E-05	4.0E-05	5.4E-05	5.9E-05	4.5E-05	1.3E-05	7.9E-06
Mercury and compounds	7439-97-6	0.65	1.37E-09	7.7E-08	6.4E-08	6.3E-08	4.8E-08	6.4E-08	7.0E-08	5.4E-08	1.5E-08	9.3E-09
Nickel compounds, insoluble	365	390	8.21E-07	4.6E-05	3.8E-05	3.8E-05	2.9E-05	3.8E-05	4.2E-05	3.2E-05	9.3E-06	5.6E-06
Zinc and compounds	7440-66-6	11700	2.46E-05	1.4E-03	1.1E-03	1.1E-03	8.7E-04	1.1E-03	1.3E-03	9.7E-04	2.8E-04	1.7E-04
Polychlorinated biphenyls (PCBs)	1336-36-3	16	3.37E-08	1.9E-06	1.6E-06	1.5E-06	1.2E-06	1.6E-06	1.7E-06	1.3E-06	3.8E-07	2.3E-07
Polychlorinated biphenyls (PCBs) TEQ	645	0.0002	4.21E-13	2.4E-11	2.0E-11	1.9E-11	1.5E-11	2.0E-11	2.2E-11	1.7E-11	4.8E-12	2.9E-12
Polychlorinated dibenzo-p-dioxins (PCDDs) & dibenzofura	646	0.00022	4.63E-13	2.6E-11	2.2E-11	2.1E-11	1.6E-11	2.2E-11	2.4E-11	1.8E-11	5.2E-12	3.2E-12
Hexachlorobenzene	118-74-1	1.1	2.32E-09	1.3E-07	1.1E-07	1.1E-07	8.1E-08	1.1E-07	1.2E-07	9.1E-08	2.6E-08	1.6E-08
Polybrominated diphenyl ethers (PBDEs)	447	175	3.68E-07	2.1E-05	1.7E-05	1.7E-05	1.3E-05	1.7E-05	1.9E-05	1.4E-05	4.2E-06	2.5E-06
Polycyclic aromatic hydrocarbons (PAHs)	401	29.95	6.31E-08	3.5E-06	2.9E-06	2.9E-06	2.2E-06	2.9E-06	3.2E-06	2.5E-06	7.1E-07	4.3E-07
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	8.3	1.75E-08	9.8E-07	8.1E-07	8.0E-07	6.1E-07	8.1E-07	9.0E-07	6.9E-07	2.0E-07	1.2E-07
Benzene	71-43-2	0.005	2.30E-06	1.3E-04	1.1E-04	1.1E-04	8.1E-05	1.1E-04	1.2E-04	9.0E-05	2.6E-05	1.6E-05
2,4,6-Trichlorophenol	88-06-2	1	4.60E-04	2.6E-02	2.1E-02	2.1E-02	1.6E-02	2.1E-02	2.4E-02	1.8E-02	5.2E-03	3.1E-03
***Tetrabromobisphenol A**	79-94-7	0.585	2.69E-04	1.5E-02	1.3E-02	1.2E-02	9.5E-03	1.3E-02	1.4E-02	1.1E-02	3.0E-03	1.8E-03
***2,4,6-Tribromophenol**	118-79-6	0.124	5.70E-05	3.2E-03	2.7E-03	2.6E-03	2.0E-03	2.7E-03	2.9E-03	2.2E-03	6.4E-04	3.9E-04
		Total HAPs	**4.89E-04**	0.027	0.023	0.022	0.017	0.023	0.025	0.019	0.006	0.003

EFs derived from EPA AP-42 Chapter 13.2.4 (Aggregate Handling and Storage Piles), Eq (1)
HAP EFs are based on PM10 emissions.
VOCs are based on PPM and initial % ASR, not PM. Also assumed to fully volatilize regardless of number of drops
Most VOC emissions from ASR accounted for in shredder emissions
*Not on CAO TAC list - counting for VOC
3-Sided Enclosure control efficiency 75% for PM10 from Sierra Research, 2003 Final BACM Technological and Econimic Feasibility Analysis, report for the San Joaquin Valley Unified Air Pollution Control District.

Emissions from storage piles

Pollutant	EF (lb/hr)
PM	0.098
PM_{10}	0.046
$PM_{2.5}$	0.0070

Pollutant	CAS	max PPM	EF (lb/hr)
Aluminum and compounds	7429-90-5	7870	5.39E-05
Arsenic and compounds	7440-38-2	16	1.10E-07
Barium and compounds	7440-39-3	34.5	2.36E-07
Cadmium and compounds	7440-43-9	25.4	1.74E-07
Cobalt and compounds	7440-48-4	21.9	1.50E-07
Copper and compounds	7440-50-8	35360	2.42E-04
Lead and compounds	7439-92-1	11600	7.94E-05
Manganese and compounds	7439-96-5	547	3.74E-06
Mercury and compounds	7439-97-6	0.65	4.45E-09
Nickel compounds, insoluble	365	390	2.67E-06
Zinc and compounds	7440-66-6	11700	8.01E-05
Polychlorinated biphenyls (PCBs)	1336-36-3	16	1.10E-07
Polychlorinated biphenyls (PCBs) TEQ	645	0.0002	1.37E-12
Polychlorinated dibenzo-p-dioxins (PCDDs) & dibenzofura	646	0.00022	1.51E-12
Hexachlorobenzene	118-74-1	1.1	7.53E-09
Polybrominated diphenyl ethers (PBDEs)	447	175	1.20E-06
Polycyclic aromatic hydrocarbons (PAHs)	401	29.95	2.05E-07
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	8.3	5.68E-08
		Total HAPs	**8.66E-05**

Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
PM	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
PM_{10}	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
$PM_{2.5}$	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
Aluminum and compounds	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04
Arsenic and compounds	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07
Barium and compounds	1.03E-06	1.03E-06	1.03E-06	1.03E-06	1.03E-06	1.03E-06	1.03E-06	1.03E-06	1.03E-06
Cadmium and compounds	7.61E-07	7.61E-07	7.61E-07	7.61E-07	7.61E-07	7.61E-07	7.61E-07	7.61E-07	7.61E-07
Cobalt and compounds	6.57E-07	6.57E-07	6.57E-07	6.57E-07	6.57E-07	6.57E-07	6.57E-07	6.57E-07	6.57E-07
Copper and compounds	1.06E-03	1.06E-03	1.06E-03	1.06E-03	1.06E-03	1.06E-03	1.06E-03	1.06E-03	1.06E-03
Lead and compounds	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04
Manganese and compounds	1.64E-05	1.64E-05	1.64E-05	1.64E-05	1.64E-05	1.64E-05	1.64E-05	1.64E-05	1.64E-05
Mercury and compounds	1.95E-08	1.95E-08	1.95E-08	1.95E-08	1.95E-08	1.95E-08	1.95E-08	1.95E-08	1.95E-08
Nickel compounds, insoluble	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05
Zinc and compounds	3.51E-04	3.51E-04	3.51E-04	3.51E-04	3.51E-04	3.51E-04	3.51E-04	3.51E-04	3.51E-04
Polychlorinated biphenyls (PCBs)	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07
Polychlorinated biphenyls (PCBs) TEQ	6.00E-12	6.00E-12	6.00E-12	6.00E-12	6.00E-12	6.00E-12	6.00E-12	6.00E-12	6.00E-12
Polychlorinated dibenzo-p-dioxins (PCDDs) & dibenzofura	6.60E-12	6.60E-12	6.60E-12	6.60E-12	6.60E-12	6.60E-12	6.60E-12	6.60E-12	6.60E-12
Hexachlorobenzene	3.30E-08	3.30E-08	3.30E-08	3.30E-08	3.30E-08	3.30E-08	3.30E-08	3.30E-08	3.30E-08
Polybrominated diphenyl ethers (PBDEs)	5.25E-06	5.25E-06	5.25E-06	5.25E-06	5.25E-06	5.25E-06	5.25E-06	5.25E-06	5.25E-06
Polycyclic aromatic hydrocarbons (PAHs)	8.98E-07	8.98E-07	8.98E-07	8.98E-07	8.98E-07	8.98E-07	8.98E-07	8.98E-07	8.98E-07
Bis(2-ethylhexyl) phthalate (DEHP)	2.49E-07	2.49E-07	2.49E-07	2.49E-07	2.49E-07	2.49E-07	2.49E-07	2.49E-07	2.49E-07
	0.0004	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.0004**

EFs derived from EPA 450-3-88-008 (Control of Open Fugitive Dust Sources), Eq (4-9)
HAP EFs are based on PM10 emissions.
From AP-42 13.2.4 Drop Point Equation - It is assumed that 47.3% of the TSP equals PM10, and 7.2% is PM2.5.
3-Sided Enclosure control efficiency 75% for PM10 from Sierra Research, 2003 Final BACM Technological and Econimic Feasibility Analysis, report for the San Joaquin Valley Unified Air Pollution Control District.

Fluid Draining Emissions

Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
Autos Shredded	33,740	14,482	23,269	10,382	12,809	34,601	36,532	5,024	3,188
Tons Autos Shred	53,984	23,171	37,230	16,611	20,494	55,362	58,451	8,038	5,101

Pollutant	Emission Factor	Emission Factor Units	Emission Factor Source	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
VOC	0.0691	lb/ton auto	Derived[2]	1.864	0.800	1.286	0.574	0.708	1.912	2.018	0.278	0.176
Total HAPs	0.0105	lb/ton auto	Reference 1	0.283	0.122	0.195	0.087	0.108	0.291	0.307	0.042	0.027
Individual Hazardous Air Pollutants	% of total VOC	EF (lb/ton auto)	Emission Factor Source									
2,2,4 Trimethylpentane	2.6	1.80E-03	Reference 1	4.8E-02	2.1E-02	3.3E-02	1.5E-02	1.8E-02	5.0E-02	5.2E-02	7.2E-03	4.6E-03
Benzene	2.2	1.52E-03	Reference 1	4.1E-02	1.8E-02	2.8E-02	1.3E-02	1.6E-02	4.2E-02	4.4E-02	6.1E-03	3.9E-03
Ethylbenzene	0.5	3.45E-04	Reference 1	9.3E-03	4.0E-03	6.4E-03	2.9E-03	3.5E-03	9.6E-03	1.0E-02	1.4E-03	8.8E-04
Hexane	4.4	3.04E-03	Reference 1	8.2E-02	3.5E-02	5.7E-02	2.5E-02	3.1E-02	8.4E-02	8.9E-02	1.2E-02	7.8E-03
Toluene	4.0	2.76E-03	Reference 1	7.5E-02	3.2E-02	5.1E-02	2.3E-02	2.8E-02	7.6E-02	8.1E-02	1.1E-02	7.0E-03
Xylenes	1.5	1.04E-03	Reference 1	2.8E-02	1.2E-02	1.9E-02	8.6E-03	1.1E-02	2.9E-02	3.0E-02	4.2E-03	2.6E-03
Total HAPs	15.2	1.05E-02	Reference 1	**0.283**	**0.122**	**0.195**	**0.087**	**0.108**	**0.291**	**0.307**	**0.042**	**0.027**

(1) Table 3-1 from Gasoline Distribution Industry (Stage 1) Background Information For Proposed Standards (January 1994)
(2) See "Drain" tab for formula and calculations

Emissions from Torch Cutting

Pollutant	EF (lb/hr)	Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
			(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
PM	0.05		0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
PM_{10}	0.05		0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
$PM_{2.5}$	0.05		0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
NOx	0.037		0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Chromium	2.45E-03		0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Chromium VI	1.22E-04		7.12E-04	7.12E-04	7.12E-04	7.12E-04	7.12E-04	7.12E-04	7.12E-04	7.12E-04	7.12E-04
Nickel	2.08E-03		1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02
Zinc Oxide	1.46E-04		8.52E-04	8.52E-04	8.52E-04	8.52E-04	8.52E-04	8.52E-04	8.52E-04	8.52E-04	8.52E-04
Manganese	1.88E-04		1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03
Total HAPs	2.39E-03		**0.014**	**0.014**	**0.014**	**0.014**	**0.014**	**0.014**	**0.014**	**0.014**	**0.014**

(1) EFs for annual reporting developed by ratioing the EFs for each cutting type to the average total hours cutting.
(2) Skulls and Misc. cutting hours were included in the mild steel emissions calculations.
(3) "Oxides of Nitrogen in Welding, Cutting and Oxy-Acetylene Heating Processes, A Review of Emission Rates, Exposure Levels and Control Measures" Eric Hansen, Han Thernøe. Undated.
(4) "Final Report, Development of Emission Inventory for Metal Welding, Cutting and Spraying Operations" prepared by Pacific Environmental Services, Inc. May 31, 2000.
(5) Taken from the chemical composition of 310 Stainless Steel, which has the highest chromium and nickel contents of the commonly used types of SS.
(6) It was assumed that 5% of the Chromium in the metal is converted to Chromium VI when cut with a torch. Based on EPA Chromium Speciation for welding and cutting from the 2020 NEI.
(7) Chromium is neither a TAC nor a HAP. Zinc Oxide is a TAC but not a HAP.
(8) Generally, ferrous metals are those that contain iron. In some industries, such as metal recycling, ferrous metals are those which are magnetic. Stainless Steel contains iron but is not

Emissions from Unpaved Road Dust

Pollutant	EF (ton/yr)	Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
			(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)
PM	7.25		7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
PM_{10}	1.85		1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
$PM_{2.5}$	0.18		0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18

Road Dust EFs come from AP-42 Ch 13.2.2

Emissions from all sources

Pollutant	Units		2023	2022	2021	2020	2019	2018	2017	2016	2015	PTE	
PM	ton/yr		10.12	9.76	9.73	9.32	9.76	9.94	9.48	8.40	8.23	11.3	
PM_{10}	ton/yr		3.76	3.52	3.51	3.23	3.52	3.64	3.34	2.63	2.51	4.6	
$PM_{2.5}$	ton/yr		1.37	1.23	1.22	1.05	1.23	1.30	1.11	0.68	0.61	1.9	
VOC	ton/yr		24.66	16.29	18.87	12.12	15.76	23.77	21.32	4.43	2.72	39.0	
Combined HAPs	ton/yr		8.05	6.59	6.58	4.97	6.57	7.42	5.76	1.62	0.99	12.5	
										Individual HAP PTE		4.25	Xylenes