Public Workshop

August 28, 2024

2:00 PM

PROPOSED RULE 1445 – CONTROL OF TOXIC EMISSIONS FROM LASER AND PLASMA ARC METAL CUTTING

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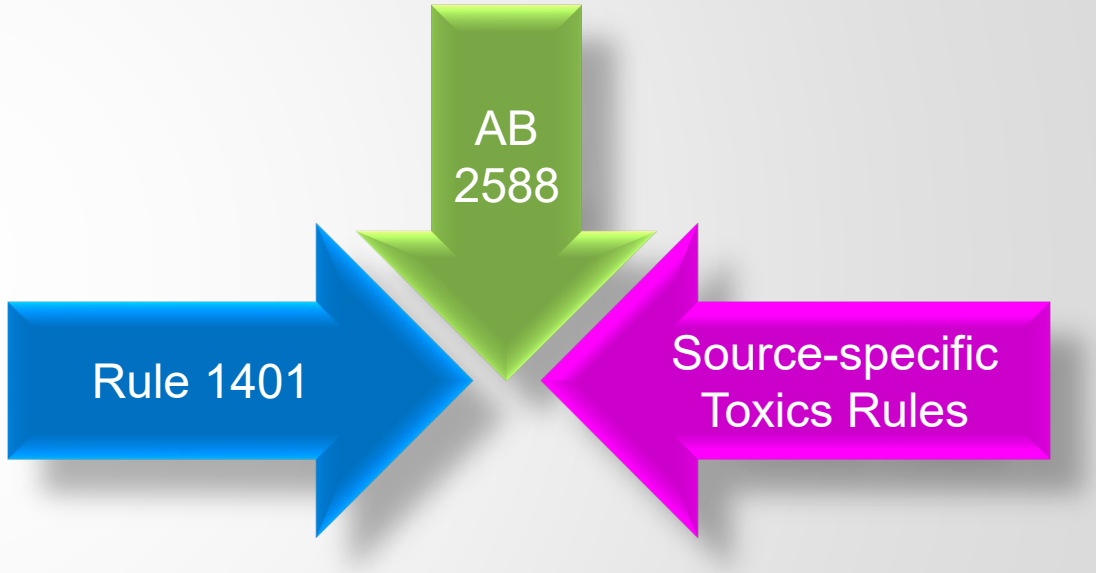
AIR TOXICS CONTROL

- South Coast AQMD has a comprehensive regulatory program to reduce toxic air contaminants
  - Rule 1401 – permitting for new, modified or relocated sources
  - Rule 1402 – implements the Air Toxics Hot Spots (AB 2588) program for existing facilities
  - Source-specific toxics rules regulating specific equipment or industry categories (e.g., Rule 1469 for chrome plating)
- Proposed Rule 1445 - Control of Toxic Emissions from Laser and Plasma Arc Metal Cutting (PR 1445) will be a source-specific toxic rule



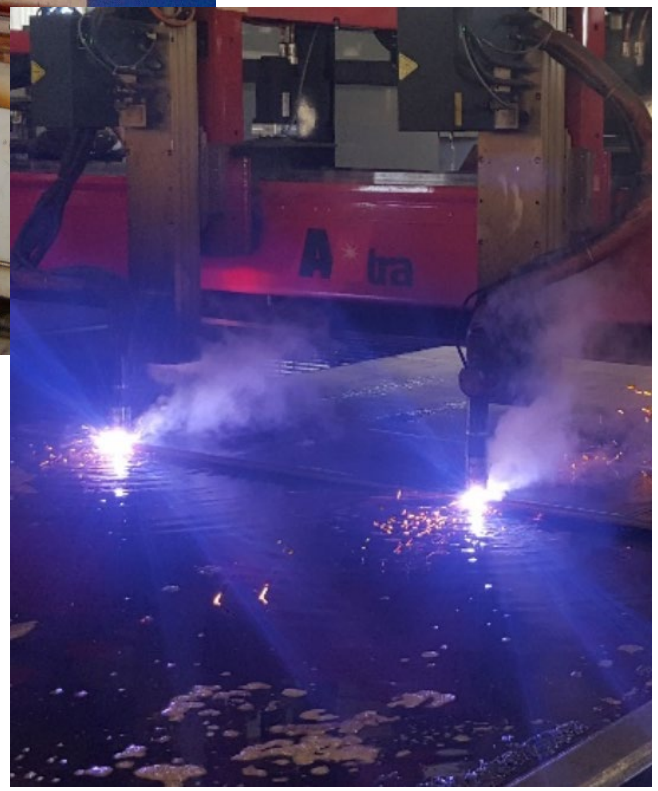
TOXIC AIR CONTAMINANTS

- Hexavalent chromium is a toxic air contaminant that is a potent carcinogen
  - Long-term inhalation of hexavalent chromium can increase the risk of developing lung and nasal cancers
- Other toxic metals, such as nickel, also have adverse health affects
  - Acute effects from nickel inhalation include gastrointestinal distress, pulmonary fibrosis, and lung and kidney damage

OEHHA
California Office of Environmental Health Hazard Assessment

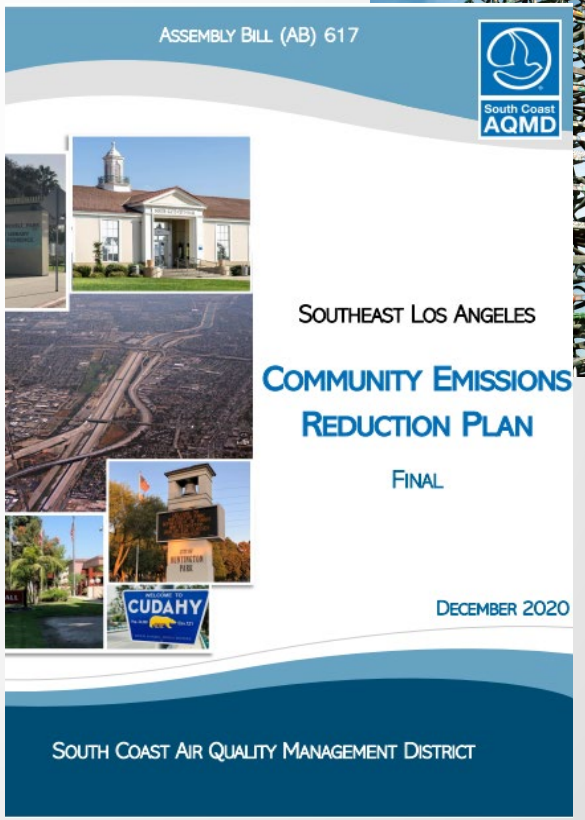
Emission Process

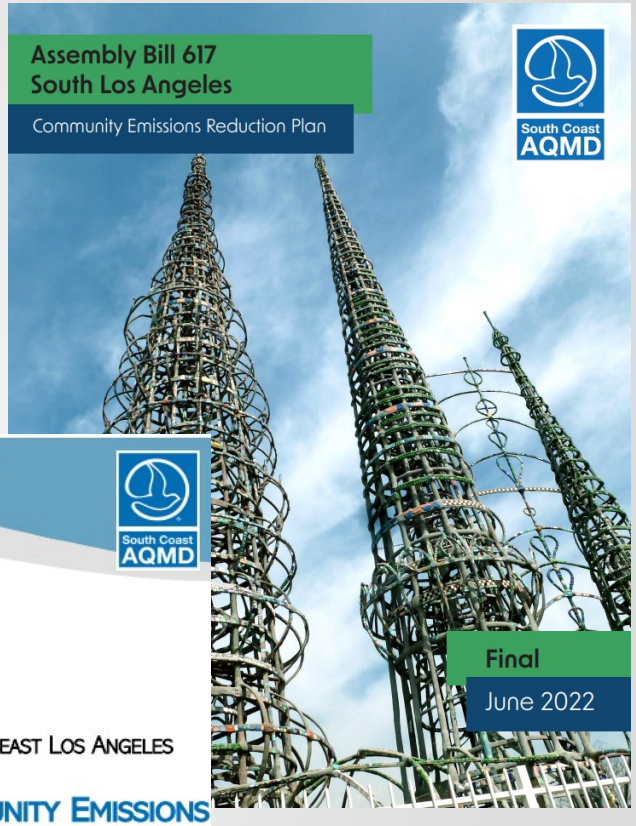
- Laser and plasma arc cutting creates fumes and smoke that may contain toxic metal particulates depending on metal processed (e.g. stainless steel, mild steel)
- Oxidation may occur under high temperature (i.e., elemental chromium to hexavalent chromium)



COMMUNITY CONCERNS

- Under Assembly Bill 617, South Coast AQMD has been working with stakeholders to develop Community Emission Reduction Plans (CERPs) to identify air pollution sources and control strategies within designated communities
- Southeast Los Angeles and South Los Angeles communities expressed concerns with hexavalent chromium and other metal toxic emissions from metal processing facilities (includes laser and plasma arc cutting activities)
- The CERPs included Actions to address community concerns





AIR QUALITY MANAGEMENT PLAN (AQMP)

- The AQMP includes control strategies to reduce air pollution and protect public health
- 2016 AQMP includes Air Toxics Control Strategy
  - Control measure TXM-05: Toxic Metal Particulate Emissions from Laser and Plasma Arc Cutting
  - Objective: Control toxic metal particulates from laser and plasma arc cutting operations

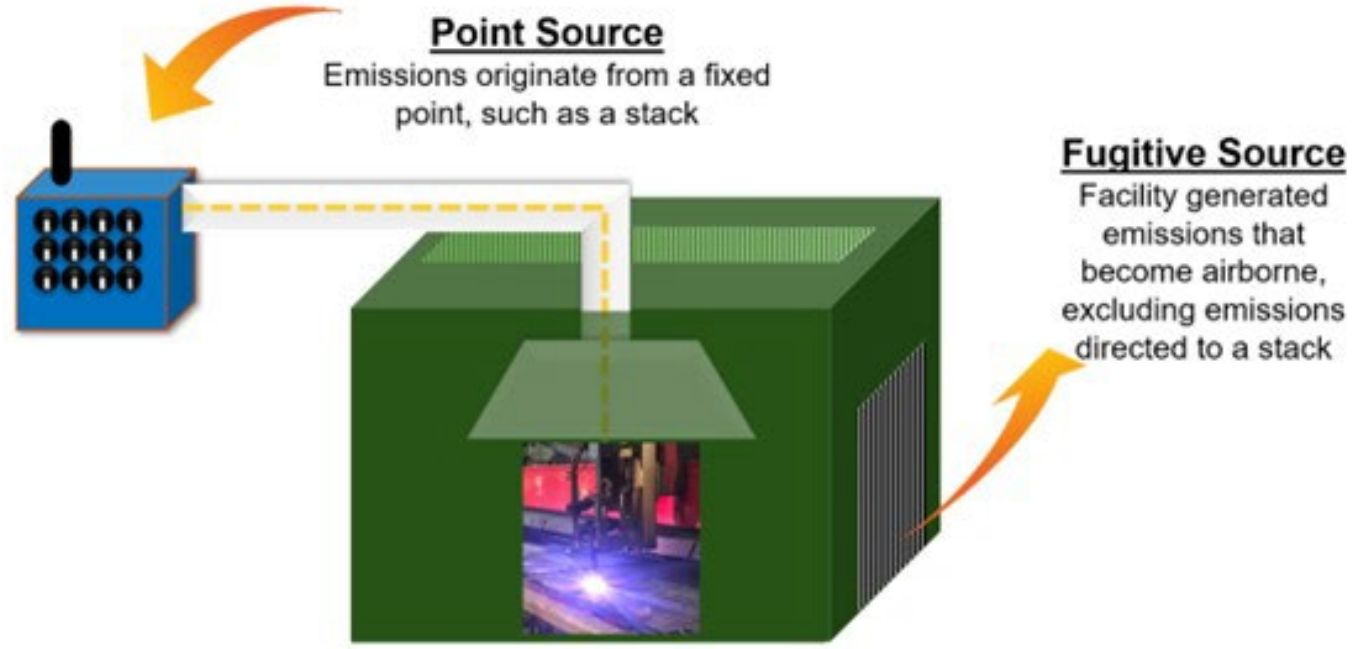
EQUIPMENT INFORMATION

- **Types of APCDs**
  - Dust Collector
    - Ventilation system to collect and direct emissions to filters
    - Can have secondary filtration (HEPA filters)
  - Water Tables (Plasma)
    - Water tank under cutting equipment to collect emissions
    - Dust Collector and secondary filtration can be added to Water Table system

Types of APCD	Fixed		Portable Plasma*
	Laser	Plasma	
Dust Collector	60	34	19
Dust Collector + HEPA	54	24	21
Water Table	N/A	24	N/A
Water Table + Dust Collector System	N/A	8	N/A
Other	N/A	None	2
None	3	10	33
Total	**117**	**100**	**75**

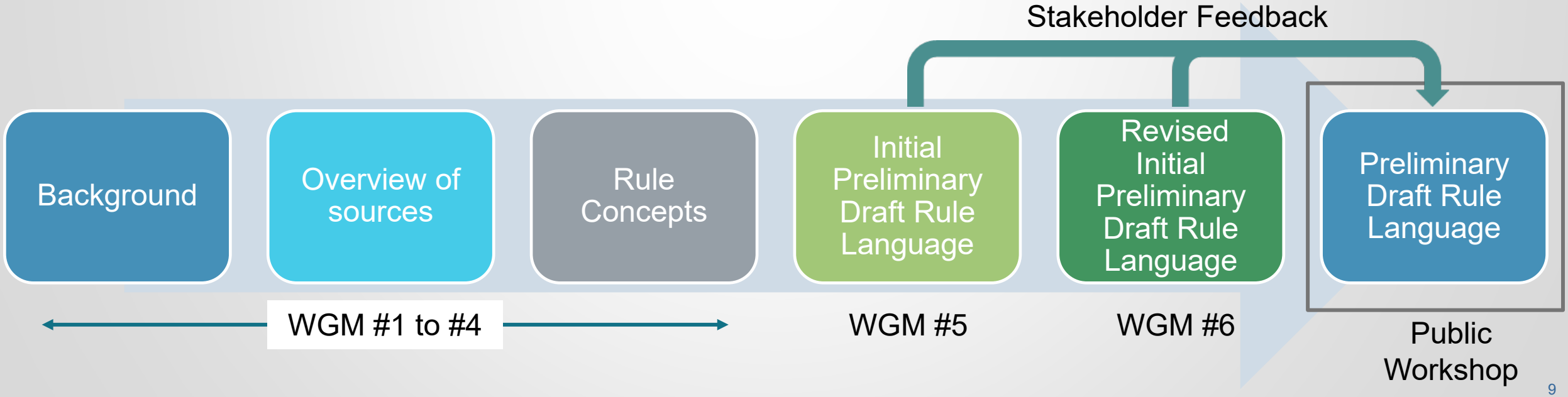
**No portable laser unit in the universe*

- PR 1445 includes requirements to reduce point and fugitive source emissions



PUBLIC PROCESS

- PR 1445 developed through a comprehensive public process
- Six Working Group Meetings (WGM)
- Site visits conducted and meetings held with stakeholders to discuss concerns



PR 1445 STRUCTURE

- (a) Purpose
- (b) Applicability
- (c) Definitions
- (d) Control Device Requirements
- (e) Performance Specifications
- (f) Testing Requirements
- (g) Pressure Drop Requirements
- (h) Building Requirements
- (i) Housekeeping Requirements
- (j) Best Management Practices
- (k) Source Testing
- (l) Recordkeeping and (m) Exemptions

Appendices

- Appendix 1 – Smoke Test Procedures
- Appendix 2 – Capture Velocity Measurement Procedures

Purpose/Applicability

(a) Purpose

The purpose of this rule is to reduce toxic air contaminant emissions from laser or plasma arc cutting equipment used for Metal Cutting.

(b) Applicability

This rule applies to any owner or operator that has been issued or is required to obtain a South Coast AQMD permit for any laser and plasma arc cutting equipment used for Metal Cutting.

- Purpose is to reduce toxic air contaminant emissions from laser and plasma arc equipment used to cut metal
- Applicability includes any owner or operator that is required to obtain a permit, or has a permit for a Metal Cutting Unit

Key Definitions – (c)

(27) UNIT means laser or plasma arc cutting equipment used to conduct Metal Cutting that uses a focused, high-powered laser beam or uses a high temperature and high velocity jet of plasma.

(6) EXISTING means any Unit or Air Pollution Control Device with an active South Coast AQMD Permit to Construct or Permit to Operate and an initial Permit Date before [*date of rule adoption*].

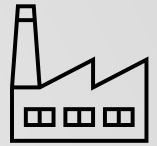
(18) NEW means any Unit or Air Pollution Control Device with a Permit Date on or after [*date of rule adoption*].

(16) METAL means any ferrous (iron-based) Metal and alloys and non-ferrous (non-iron-based) Metals and alloys.

Complete list of definitions included in rule language

- Unit is an umbrella term for permitted laser and plasma arc cutting equipment
- Existing distinguishes between Units that have had their initial permit issued before the date of rule adoption
- New distinguishes between Units that have had a permit issued on or after date of rule adoption
- Metal is defined; examples include pure metals such as aluminum or alloys such as stainless steel or mild steel

d) Control Device Requirements



New Units – (d)(1)

(d) Control Device Requirements

(1) An owner or operator shall not operate any New Portable and/or New Fixed Unit unless emissions from the Unit are collected and vented to an Air Pollution Control Device with HEPA Filters or filters individually tested and certified by the manufacturer to have a control efficiency of at least 99.97 percent on 0.3 micron or smaller particles.

Control Device Requirements for New Units

- HEPA or better filtration required (control efficiency of at least 99.97% on 0.3 micron or smaller particles)

Compliance Schedule – Existing Portable Units (Table 1)

Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s)

Metal Processed	Minimum Air Pollution Control Device Requirement	Permit Application Due Date	Effective Date**
Metals Other than Stainless Steel, Nickel Alloy, or Unknown Metal	99% control efficiency or greater by weight*	January 1, 2027	No later than 18 months after a South Coast AQMD permit is issued or three years after the permit application due date, whichever date is earlier
Stainless Steel, Nickel Alloy or Unknown Metal	Operated with HEPA or better final filtration	July 1, 2026	

*for total suspended particles or particulate matter 10 microns or less in diameter

** In cases where the operator is in violation because of a failure to demonstrate or maintain exemption eligibility criteria under paragraph (m)(4), the operator shall submit complete permit application(s) for equipment that meets the Minimum Air Pollution Control Device Requirement within 90 days of receiving a written notice from the Executive Officer and shall demonstrate compliance with subdivision (d) requirements no later than 18 months after the permit is issued and no later than two years after receiving the written notice.

Control Device Requirements for Existing Portable Units

- Table 1 establishes minimum Air Pollution Control Device requirement based on type of Metal processed
- Permit application due date included for facilities that need to install/modify an Air Pollution Control Device
- Effective date set three years after permit application due date or 18 months after a permit is issued

Compliance Schedule Existing Fixed Units (Table 2)

Metal Processed	Air Pollution Control Device Type	Minimum Air Pollution Control Device Requirement	Permit Application Due Date	Effective Date
Metals Other than Stainless Steel, Nickel Alloy, or Unknown Metal	No APCD or APCD not identified below	99% control efficiency or greater by weight*	January 1, 2028	No later than 18 months after a South Coast AQMD permit is issued or three years after the permit application due date, whichever date is earlier
	Water Tables with Permit Conditions that Require Fully Submerged Metal Cutting, or Dust Collectors, or Both		January 1, 2038	
Stainless Steel, Nickel Alloy, or Unknown Metal	No APCD or APCD not identified below	99.97% control efficiency or greater by weight* Or Operated with HEPA or better final filtration	January 1, 2027	No later than 18 months after a South Coast AQMD permit is issued or three years after the permit application due date, whichever date is earlier
	Water Tables with Permit Conditions that Require Fully Submerged Metal Cutting, or Dust Collectors, or Both		January 1, 2037	

*for total suspended particles or particulate matter 10 microns or less in diameter

Control Device Requirements for Existing Fixed Units

- Table 2 establishes minimum Air Pollution Control Device requirement based on type of Metal processed
- Compliance timeframes are based on Air Pollution Control Device type
  - Accelerated compliance schedule for Existing Units operating with lower efficiency, or no Air Pollution Control Device

Demonstration of Control Device Efficiency (d)(3) and (d)(4)

(3) An owner or operator of an Existing Unit used to exclusively cut Metal other than Stainless Steel, Nickel Alloy, or an Unknown Metal shall operate the Unit with an Air Pollution Control Device that meets the minimum Air Pollution Control Device requirement in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 – Requirement and Compliance Schedule for Existing Fixed Unit(s) as demonstrated by at least one of the following:

(A) Performing a source test pursuant to subdivision (k) that has been reviewed and approved by the Executive Officer with results demonstrating compliance;

(B) Control technology fact sheets issued by the U.S. EPA; or

(C) Manufacturers' specifications of guaranteed particulate removal efficiency.

(4) An owner or operator of an Existing Unit used to cut Stainless Steel, Nickel Alloy, or an Unknown Metal shall operate the Unit with an Air Pollution Control Device that meets the minimum Air Pollution Control Device requirement in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 – Requirement and Compliance Schedule for Existing Fixed Unit(s) as demonstrated by at least one of the following:

(A) Performing a source test pursuant to subdivision (k) that has been reviewed and approved by the Executive Officer with results demonstrating compliance; or

(B) Manufacturers' specifications for individually tested and certified filters.

Air Pollution Control Device documentation

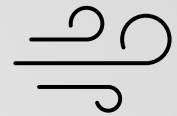
Metals other than Stainless Steel, Nickel Alloys

A. Source test reviewed and approved by Executive Officer
B. U.S. EPA fact sheets
C. Manufacturer specifications

Stainless Steel, Nickel Alloy, Unknown Metals

A. Source test reviewed and approved by Executive Officer
B. HEPA or better filtration based on individually tested and certified filters

e) Performance Specifications for Unit(s) Vented to a Filter-Based APCD



Performance Specifications for Unit(s) Vented to a Filter-Based APCD - (e)

(e) Performance Specifications for Unit(s) Vented to a Filter-Based Air Pollution Control Device

An owner or operator shall not operate a Portable or a Fixed Unit unless compliance with the following performance specifications for the associated Filter-Based Air Pollution Control Device is demonstrated pursuant to subdivision (f):

(1) Acceptable smoke test; and

(2) Capture Velocity of at least 150 feet per minute.

Only applicable to filter-based control devices (e.g., dust collectors, HEPA)

- Capture efficiency
  - Use of smoke sticks to demonstrate smoke is being collected by APCD without meandering
- Capture Velocity
  - 150 feet per minute as measured by anemometer

f) Testing Requirements

Testing Requirements for Performance Specifications – (f)(1) and (f)(2)

(f) Testing Requirements for Unit(s) Vented to a Filter-Based Air Pollution Control Device

(1) An owner or operator of a Unit shall demonstrate compliance with paragraph (e)(1) for each Existing or New Filter-Based Air Pollution Control Device by conducting an acceptable smoke test using the procedure set forth in Appendix 1 – Smoke Test Procedures and in accordance with the compliance schedule in Table 3 – Parametric Monitoring Compliance Schedule.

(2) An owner or operator of a Unit shall demonstrate compliance with paragraph (e)(2) for each Existing or New Filter-Based Air Pollution Control Device by conducting Capture Velocity measurements using the procedure set forth in Appendix 2 – Capture Velocity Measurement Procedures and in accordance with the compliance schedule in Table 3 – Parametric Monitoring Compliance Schedule.

Only applicable to filter-based control devices (e.g., dust collectors, HEPA)

Smoke Test

- Conducted in accordance with Appendix 1 – Smoke Test Procedures

Capture Velocity

- Air velocity measurements as specified in Appendix 2 – Capture Velocity Measurement Procedures

Table 3 establishes testing compliance schedule

Table 3 – Parametric Monitoring Compliance Schedule (only applicable to filter-based control devices)

- Separate schedule for Existing and New Units
- Requires initial test, followed by periodic recurring tests

Table 3 – Parametric Monitoring Compliance Schedule

Requirement	Existing Air Pollution Control Device		New Air Pollution Control Device	
	Initial Test*	Subsequent Test Frequency	Initial Test	Subsequent Test Frequency
Smoke Test	On or before July 1, 2025	At least once every 6 months after the prior test	Within 90 days after commencement of initial operation as allowed under South Coast AQMD permits	At least once every 6 months after the prior test
Capture Velocity	On or before January 1, 2027	At least once every 24 months after the prior test		At least once every 24 months after the prior test

*In cases where the operator is in violation because of a failure to demonstrate or maintain exemption eligibility criteria under paragraph (m)(4), the operator shall become subject to the initial test requirement within 90 days of receiving a written notice from the Executive Officer.

Testing Requirements - Failed Demonstrations (f)(3)

(3) An owner or operator of an Existing or New Filter-Based Air Pollution Control Device that does not demonstrate that the Air Pollution Control Device meets the requirements in paragraph (e)(1) or (e)(2), as applicable, shall:

(A) Notify the Executive Officer by calling 1-800-CUT-SMOG within 24 hours of when the owner or operator knew or reasonably should have known of the Unit's failed demonstration; and

(B) Perform necessary actions or repairs to meet the requirements of paragraphs (e)(1) or (e)(2).

Procedures for a facility to follow if any of the testing requirements are not met

- Notify the Executive Officer
- Take actions or repairs to meet performance specifications

(g) Pressure Drop Requirements for Units Vented to a Filter-Based APCD

Pressure Drop Requirements for Units Vented to a Filter-Based APCD – (g)(1)

(g) Pressure Drop Requirements for Unit(s) Vented to a Filter-Based Air Pollution Control Device

(1) Beginning July 1, 2025, for an Existing Air Pollution Control Device; and beginning with the date of commencement of initial operation for each New Air Pollution Control Device, an owner or operator shall not operate the Unit unless the following conditions are met:

(A) Install and operate a pressure gauge to indicate and monitor, in inches of water column, the pressure drop across each filter stage of the Air Pollution Control Device during operation; and

(B) Ensure that the gauge:

(i) Is operated and maintained in accordance with manufacturer's specifications;

(ii) Is positioned so that it is easily readable and in clear sight; and

(C) Unless pressure drop is specified by South Coast AQMD permit conditions, maintain the pressure drop across each filter stage of the Air Pollution Control Device per manufacture's specifications such that the pressure drop remains:

(i) At or below the maximum pressure drop; and

(ii) At or above the minimum pressure drop.

Only applicable to filter-based control devices (e.g., dust collectors, HEPA)

- Beginning January 1, 2025 (*initial operation date for new Units*) PR 1445 includes standardized pressure drop requirements
- Require a gauge to measure pressure drop
- In operation, maintain the pressure drop in accordance with manufacturer specifications, if not identified in permit conditions

Pressure Drop Requirements – Pressure Gauge Alternative (g)(2) and Documentation (g)(3)

(2) In lieu of meeting the requirement in paragraph (g)(1), an owner or operator of an Existing Air Pollution Control Device associated with an Existing Portable Unit that does not include South Coast AQMD permit conditions that require installation and operation of a pressure gauge may elect to operate and maintain the Air Pollution Control Device per manufacturer specifications.

(3) An owner or operator of a Unit shall record the pressure drop as measured by the gauge required in subparagraph (g)(1)(A) at least once each calendar day when Metal Cutting is conducted.

Alternative compliance pathway

- Applicable to Existing Portable Units where pressure gauge installation retrofits are not feasible
- Operate per manufacturer specifications, if permit conditions do not require a gauge

Monitor pressure drop

- Record pressure drop each day when Metal Cutting is conducted

Pressure Drop Requirements – (g)(4)

(4) An owner or operator of any Unit vented to Air Pollution Control Device that does not meet the pressure drop provisions of subparagraph (g)(1)(C) or the manufacturer specifications of paragraph (g)(2) shall:

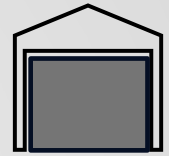
(A) Notify the Executive Officer by calling 1-800-CUT-SMOG within 24 hours of when the owner or operator knew or reasonably should have known of the Unit's failed demonstration; and

(B) Perform necessary actions or repairs to meet the requirements of subparagraph (g)(1)(C) and/or paragraph (g)(2), as applicable.

Procedures for a facility to follow if any pressure drop or manufacturer specifications are not met

- Notify the Executive Officer
- Take actions or repairs to meet performance specifications

h) Building Requirements



Building Requirements – (h)(1) and (h)(2)

(h) Building Requirements

(1) Beginning July 1, 2025, an owner or operator of a Fixed Unit shall operate each Fixed Unit within a Building.

(2) Beginning January 1, 2026, except during the movement of vehicles, equipment, or people for ingress and egress to the Building, an owner or operator of a Unit located within a Building shall, during Metal Cutting, close any Building openings to the exterior within 20 feet of a Unit to prevent the passage of air through use of one or more of the following:

(A) A door that closes;

(B) Overlapping floor-to-ceiling plastic strip curtain; or

(C) A vestibule.

Building Requirements

- Initial requirement to operate Fixed equipment within a Building (July 1, 2025)
- After January 1, 2026, options are provided for closing openings near Fixed Units during Metal Cutting

Building Requirements – (h)(3) and (h)(4)

(3) Beginning January 1, 2026, if the Building contains openings to the exterior that are on opposite ends of the Building where air can pass through any area where Metal Cutting occurs, an owner or operator of a Unit shall close openings on at least one end for each pair of opposing ends of a Building during Metal Cutting within the Building, except during the passage of vehicles, equipment, or people for ingress or egress to the Building through use of one or more of the methods in subparagraphs (h)(2)(A) through (h)(2)(C).

(4) Beginning January 1, 2026, except during the movement of vehicles, equipment, or people for ingress and egress to the Building, an owner or operator of a Fixed Unit shall close any Building opening through use of one or more of the methods listed in subparagraphs (h)(2)(A) through (h)(2)(C) for the opening that faces the nearest:

(A) Sensitive Receptor, other than the nearest School, that is located within 1,000 feet, as measured from the property line of the Sensitive Receptor to the Building opening; and

(B) School that is located within 1,000 feet, as measured from the property line of the School to the Building opening.

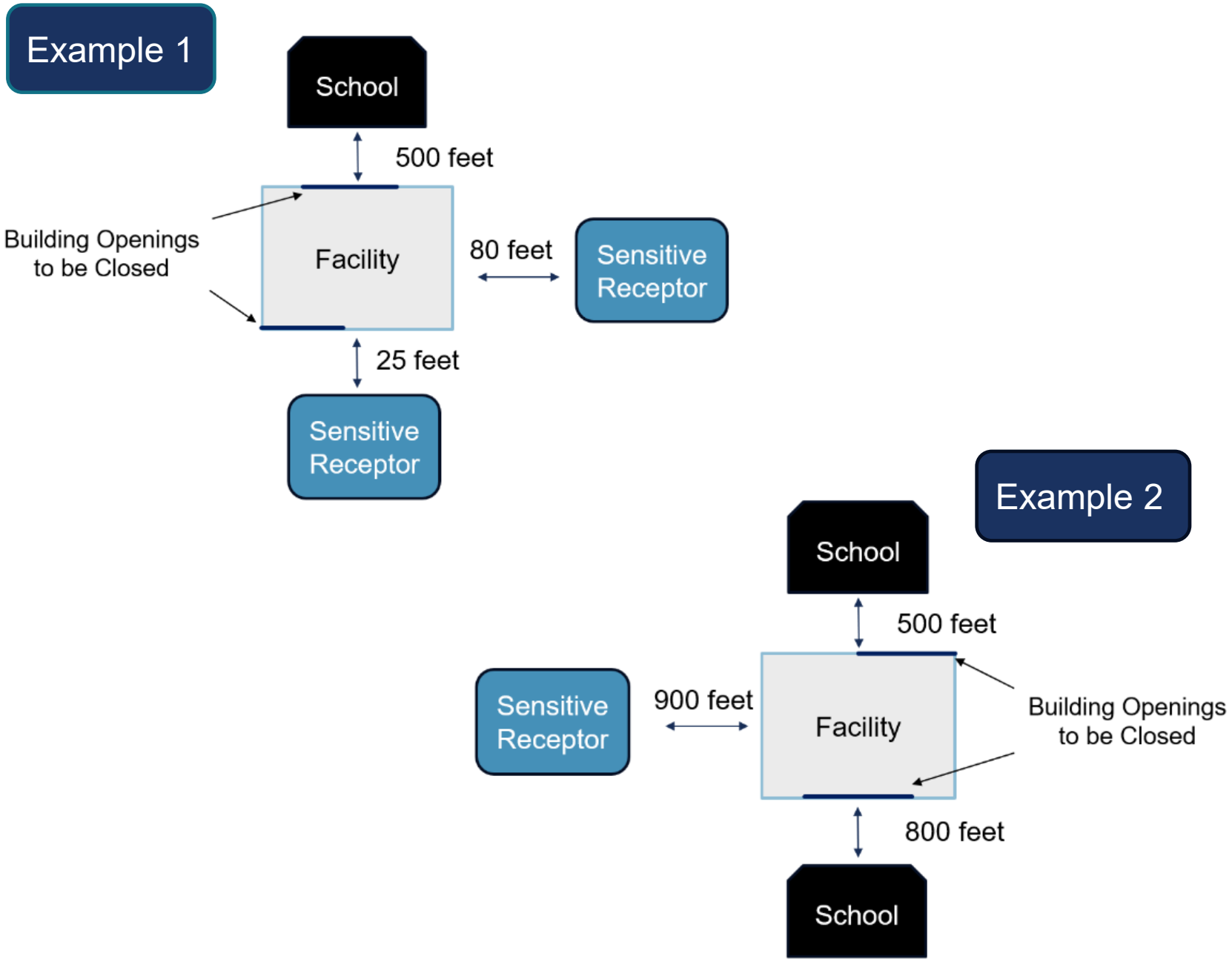
Building Requirements

After January 1, 2026, use one of the previously specified options to close

- At least one opening on opposing ends of a Building during Metal Cutting
- Openings within 1,000 feet of a Sensitive Receptor or a School

Building Requirements

Examples of scenarios where Sensitive Receptors and a School are near a Facility - paragraph (h)(4) provisions



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Building Requirements – (h)(5) [Outdoor Metal Cutting]

(5) Beginning on the effective dates in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s), an owner or operator of a Portable Unit that conducts Metal Cutting outside of a Building shall meet the following requirements:

(A) For Grade Level operations, conduct Metal Cutting within a Wind Barrier during Metal Cutting; and/or

(B) For Non-Grade Level operations, either conduct Metal Cutting within a Wind Barrier during Metal Cutting or conduct an acceptable smoke test pursuant to the procedure in Appendix 1 – Smoke Test Procedures prior to Metal Cutting on the day of operation.

Requirements for a Portable Unit outside of a Building

- For Grade Level operations
  - Use a Wind Barrier
- For Above Grade Level operations
  - Use a Wind Barrier or demonstrate adequate collection through an acceptable smoke test (Appendix 1)

Effective date is based on Table 1 compliance schedule (*i.e., 2027/2028*)

Building Requirements – (h)(6) [Outdoor Metal Cutting – Alternative to Wind Barrier]

(6) In lieu of meeting the requirement in paragraph (h)(5), an owner or operator of a Portable Unit that conducts Metal Cutting outside of a Building on Metal pieces greater than ten feet in height or length may elect to meet the following requirements:

(A) Operate and maintain an Air Pollution Control Device with a collection hood greater than one square foot that has been demonstrated to meet the performance specifications of paragraph (e)(2); and

(B) Conduct an acceptable smoke test pursuant to the procedure in Appendix 1 – Smoke Test Procedures prior to Metal Cutting on the day of operation.

Alternative Compliance pathway where Wind Barrier is not feasible

- Operate and maintain an Air Pollution Control Device with collection hood greater than one square foot
- Demonstrate adequate collection through an acceptable smoke test (Appendix 1)

i) Housekeeping

Housekeeping – (i)

(i) Housekeeping

(1) Beginning July 1, 2025, the owner or operator of a Unit shall clean the following areas using Approved Cleaning Methods:

(A) Floors within 20 feet of any Unit on each calendar day when Metal Cutting is conducted, except for Portable Units used for outdoor, Non-Grade Level operations;

(B) Floors within 20 feet of an Air Pollution Control Device:

(i) On a weekly basis for Fixed Metal Cutting operations when Metal Cutting is conducted within the calendar week; and

(ii) For each calendar day when Portable Metal Cutting operations are conducted, except for Portable Units used for outdoor, Non-Grade Level operations.

(2) In lieu of paragraph (i)(1), the owner or operator of a Portable Unit that conducts Metal Cutting outside of a Building and within a Wind Barrier shall clean areas within the Wind Barrier using Approved Cleaning Methods at least once per day.

(3) Beginning July 1, 2025, the owner or operator of a Unit shall store and dispose materials generated from paragraph (i)(1) and if applicable paragraph (i)(2) in closed Leak-Tight containers that prevent the release of Fugitive Dust.

Housekeeping

- Beginning January 1, 2025, use Approved Cleaning Methods to clean around
  - Units (daily when Unit is used)
  - Air Pollution Control Devices (weekly for Fixed Unit, daily when Portable Unit is used)
- Alternative compliance option for outdoor cutting conducted within a Wind Barrier
- Store and dispose materials collected during housekeeping in closed containers

j) Best Management Practices

Best Management Practices – (j)

(j) Best Management Practices

Beginning July 1, 2025, the owner or operator of a Unit vented to a Filter-Based Air Pollution Control Device shall:

(1) Inspect and maintain in accordance with the manufacturers' recommended schedule for inspecting and maintaining any Air Pollution Control Device for the Unit. If the inspection frequency is not specified by the manufacturer, inspection and maintenance activities shall be conducted at least once per calendar quarter;

(2) Ensure that air flow is not obstructed between the Unit and any Air Pollution Control Device; and

(3) Enclose all used filter media in Leak-Tight containers at all times.

Only applicable to filter-based control devices (e.g., dust collectors, HEPA)

- Beginning July 1, 2025
  - Conduct routine inspection and maintenance
  - Prevent air flow obstructions
  - Enclose used filter media

k) Source Testing

Source Testing Requirements – (k)

(k) Source Testing

The owner or operator of a Unit that conducts a source test pursuant to paragraph (d)(3) or (d)(4) shall:

(1) Prior to conducting a source test, submit a source test protocol for approval to the Executive Officer no later than 12 months prior to the applicable permit application due date in by Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 - Requirement and Compliance Schedule for Existing Fixed Unit(s);

(2) Report the source test schedule to the Executive Officer at least 10 days prior to the start of any source test in writing by electronic mail to sourcetesting@aqmd.gov or a South Coast AQMD web portal or verbally by telephone to 1-800-CUT-SMOG;

(3) Report any changes to the source test schedule in writing by electronic mail to sourcetesting@aqmd.gov or a South Coast AQMD web portal or verbally by telephone to 1-800-CUT-SMOG 24 hours prior to the start of source testing or within one (1) hour of discovery of a change in the source testing schedule;

approved by the Executive

conditions or a maximum source test protocol;

lethods for Measurement of te Matter Emissions or an

y the Executive Officer;

(E) That includes a demonstration that the performance standards of subdivision (e) are met, or alternative design criteria and ventilation velocities approved by the Executive Officer;

(F) When assessing the efficiency of controlling emissions:

(i) Measure or determine the total inlet mass emissions in lbs. of particulate entering the Air Pollution Control Device for any Unit; and

(ii) Measure or determine the total outlet mass emissions in lbs. of particulate exhausted from the Air Pollution Control Device; and

(5) Submit the source test report to the Executive Officer within 120 days of completing all sampling for the source test and prior to the applicable effective dates in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 - Requirement and Compliance Schedule for Existing Fixed Unit(s).

Source testing not required for PR 1445

- Subdivision (k) specifies procedures for facilities electing to use a source test to demonstrate Air Pollution Control Device control efficiency
  - Prior approval of source test protocol
  - Notifications
  - Procedures for assessing control efficiency
  - Report submittal

I) Recordkeeping

Recordkeeping – (l)

(l) Recordkeeping Requirements

(1) The owner or operator of a Unit shall:

(A) Maintain records demonstrating compliance with Air Pollution Control Device requirements of subdivision (d), including filter technical specification sheets with filter control efficiency and the dates when filters are replaced for all filter stages installed in a Filter-Based Air Pollution Control Device subject to this rule.

(B) Maintain records demonstrating compliance with testing requirements of subdivision (f) and subparagraph (h)(5)(B) including:

(i) Name of the person(s) conducting the measurement or demonstration;

(ii) Identification of each Air Pollution Control Device, including the permit numb

(iii) Date and tim

(iv) Description demonstratio

(v) Calibration records measurement or dem

(vi) Results of the measu Air Pollution Control

(vii) Description of any m each Air Pollution Co

(C) Maintain records of Air Pollu required in paragraph (g) subparagraph (g)(4)(B).

(D) Maintain records demon requirements specified in sub

(E) Maintain records of the inspections and maintenance activities to any Air Pollution Control Device conducted pursuant to the requirements of subdivision (j), including:

(i) Name of the person(s) performing the inspection and maintenance activities for each Air Pollution Control Device;

(ii) Identification of each Air Pollution Control Device, including the permit number or the device id Coast AQMD permit;

(iii) Date and time of the inspection

(iv) Documentation of filter media tears, or found to be improperly

(v) Description of any maintenanc any Air Pollution Control Devi

(2) Beginning with the effective dates in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 – Requirement and Compliance Schedule for Existing Fixed Unit(s), as applicable, an owner or operator of a Unit processing Metals other than Stainless Steel, Nickel Alloy, or Unknown Metals that does not contain permit conditions specifying type and composition of Metals processed shall maintain Safety Data Sheets to document the composition of Metals processed by each Unit.

(3) An owner or operator of a New Filter-Based Air Pollution Control Device shall maintain records to document the permit number and initial operation date of the Air Pollution Control Device, and a list of Unit(s) vented to the Air Pollution Control Device, including permit numbers.

(4) The owner or operator shall maintain all records demonstrating compliance with this subdivision and subdivision (m) for at least five years and the records shall be made available to South Coast AQMD personnel upon request with at least the two most recent years kept onsite.

Recordkeeping is a process to demonstrate compliance with PR 1445 requirements, including

- Air Pollution Control Device efficiency (d)
- Testing (f)
- Pressure Drop (g)
- Housekeeping (i)
- Best Management Practices (j)

m) Exemptions

Exemptions – (m)(1)

(m) Exemptions

(1) Subdivisions (d), (e), (f), (g), (h), (i), (j) and (k), and paragraphs (l)(1) through (l)(3) shall not apply to a Facility provided:

(A) All Units are subject to permit conditions that prohibit the Metal Cutting of any Metal that contains more than 0.1 % by weight of any toxic air contaminant identified in Table 1 of Rule 1401 – New Source Review of Toxic Air Contaminants with an effective date of September 1, 2017. This provision does not apply to Metals that contain more than 0.1 % of chromium by weight; and

(B) The owner or operator maintains records, including manufacturer-supplied Safety Data Sheet(s) to demonstrate compliance with subparagraph (m)(1)(A).

Intent is to exclude a Facility where all Units are not a source of toxic emissions

- Permit conditions and recordkeeping required to demonstrate eligibility for all Units

Exemptions – (m)(2) and (m)(3)

(2) Subdivisions (d), (e), (f), (g), (h), (i), (j) and (k), and paragraphs (l)(1) through (l)(3) shall not apply to any New Units provided:

(A) The Units are subject to permit conditions that prohibit the Metal Cutting of any Metal that contains more than 0.1 % by weight of any toxic air contaminant identified in Table 1 of Rule 1401 – New Source Review of Toxic Air Contaminants effective at the time the permit application is deemed complete. This provision does not apply to Metals that contain more than 0.1 % of chromium by weight; and

(B) The owner or operator maintains records, including manufacturer-supplied Safety Data Sheet to demonstrate compliance with subparagraph (m)(2)(A)

(3) Paragraphs (h)(2), (h)(3), and (h)(4) shall not apply to a Facility provided all Units are within a Permanent Total Enclosure(s) vented to Air Pollution Control Device(s) that meet the requirements in subdivision (d). For the purposes of this rule, strip curtains are not acceptable for use as a Permanent Total Enclosure.

Intent is to exclude a Unit that is not a source of toxic emissions from requirements other than recordkeeping

Units within a Permanent Total Enclosure vented to an APCD are excluded from Building requirements

Exemptions – (m)(4)

(4) Subdivisions (d), (e), (f), (g), (h), (i) and (k), and paragraphs (l)(1) through (l)(3) shall not apply to a Portable Unit provided:

(A) The Unit is used exclusively for maintenance and repair activities for less than 40 hours during a calendar year; and

(B) The owner or operator maintains a data activity log to document the date and time duration of each use for:

(i) Maintenance and repair; and

(ii) Any other activity.

Low use exemption for portable units used for maintenance and repair activities

- Recordkeeping required
- Best Management Practices required if Unit is currently vented to Filter-Based Air Pollution Control Device

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Exemptions – (m)(5)

(5) Subdivision (d), and for an Existing Unit operating without an Air Pollution Control Device subdivisions (d), (e), (f), (g), (h), (i), (j) and (k), and paragraphs (l)(1) through (l)(3), shall not apply to an Existing Unit provided the following conditions are met:

(A) The permit application for the Unit was deemed complete on or after September 1, 2017;

(B) Health risk resulting from the Unit, determined based on the South Coast AQMD Risk Assessment Procedures for Rule 1401 - New Source Review of Toxic Air Contaminants adopted on or after September 1, 2017, and reviewed and approved by the Executive Officer under the permit application described in subparagraph (m)(5)(A) prior to *[date of rule adoption]*, has met the requirements in paragraphs (d)(1), (d)(2), and (d)(3) of Rule 1401 – New Source Review of Toxic Air Contaminants.

(C) No later than one year before the applicable permit application due date listed in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 – Requirement and Compliance Schedule for Existing Fixed Unit(s), the owner or operator of an Existing Unit submits a complete permit application to modify the permit to include conditions to:

(i) Limit toxic emissions at or below the amount evaluated in the approved risk assessment described in subparagraph (m)(5)(B); and

(ii) Specify that subparagraph (m)(5)(B) has been met.

Recently permitted Units evaluated under most recent Rule 1401 health risk procedures can be excluded from subdivision (d) Control Device requirements if permit modification is submitted to

- Limit toxic emissions
- Document compliance with subparagraph (m)(5)(B)

Those Units without an APCD can be excluded from most rule requirements if the same conditions are met

Exemptions – (m)(6)

(6) Subdivision (d) shall not apply to an Existing Unit provided the following conditions are met:

(A) No later than one year before the applicable permit application due date listed in Table 1 – Requirement and Compliance Schedule for Existing Portable Unit(s) or Table 2 – Requirement and Compliance Schedule for Existing Fixed Unit(s), the owner or operator of an Existing Unit submits a complete permit application to demonstrate, using the most recent South Coast AQMD Risk Assessment Procedures for Rule 1401 - New Source Review of Toxic Air Contaminants when the application is deemed complete, that toxic emissions from the Unit do not result in any of the following at any receptor location based on a Tier 1 or Tier 2 health risk assessment:

(i) A maximum individual cancer risk over one-in-one million;

(ii) A Chronic Hazard Index that exceeds 1.0; and

(iii) An Acute Hazard Index that exceeds 1.0.

(B) The permit application is approved by the Executive Officer; and

(C) The permit includes conditions to limit toxic emissions at or below the amount evaluated in the approved risk assessment described in subparagraph (m)(6)(A) and to specify the Unit is exempt from the applicable Rule 1445 requirements.

Older permits with low emissions / low use can be excluded from requirements to upgrade/install an APCD provided permit includes conditions to

- Limit toxic emissions based on the latest Rule 1401 health risk assessment procedures
- Document compliance with subparagraph (m)(6)(A)

Appendix 1 -
Smoke Test Procedures

Appendix 1 specifies procedures for conducting smoke tests including

- Necessary equipment
- Testing conditions/location
- Procedures
- Documentation
  - Photographs, or
  - Video

Appendix 1 – Smoke Test Procedures

1. Applicability and Principle

   1.1 Applicability. This method applies to an owner or operator of a Portable or Fixed Unit that is required to conduct a smoke test pursuant to subdivisions (e) and (f) or subparagraph (h)(5)(B).

   1.2 Principle. A smoke device placed within the area where collection of emissions by the ventilation system occurs reveals if acceptable capture efficiency is achieved.

2. Apparatus

   2.1 Smoke Generator. The smoke generator shall be adequate to produce a persistent stream of visible smoke (e.g., smoke sticks). The smoke generating device shall not provide excessive momentum to the smoke stream that may create a bias in the determination of capture efficiency. If the device provides slight momentum to the smoke stream, it shall be released perpendicular to the direction of the capture velocity. The smoke generator must be at full generation during the entire test and operated according to manufacturer's suggested use.

3. Testing Conditions

   3.1 Equipment Operation. Any equipment to be smoke tested that can generate heat as part of normal operation must be smoke tested under normal operating conditions. Operating parameters of the equipment during the smoke test shall be recorded. The smoke test shall be conducted while the Air Pollution Control Device is in normal operation, including any limits on the size of a downdraft table vent area included in a permit condition. The position of any adjustable dampers that can affect air flow shall be documented. Precautions should be taken by the Facility to evaluate any potential physical hazards to ensure the smoke test is conducted in a safe manner.

   3.2 Cross Draft. The smoke test shall be conducted while the Air Pollution Control Device is in normal operation and under typical draft conditions representative of the Facility's Metal Cutting operations. This includes cooling fans and openings affecting draft conditions around the Metal Cutting area including, but not limited to, vents, windows, doorways, bay doors, and roll-ups, as well as the operation of other workstations and traffic.

4. Procedure

   4.1 Air Pollution Control Devices for a Fixed Unit: For Metal Cutting equipment equipped with collection slots or hoods, the smoke shall be released at the Metal Cutting plane (i.e., the point where Metal Cutting occurs) of the laser or plasma

Appendix 2 - Capture Velocity Measurement Procedures

Appendix 2 specifies procedures for measuring Capture Velocity including

- Necessary equipment
- Testing conditions/location
- Procedures
- Documentation
  - Testing information
  - Anemometer calibration
  - Air Velocity measurements

Appendix 2 – Capture Velocity Measurement Procedures

1. Applicability

1.1 Applicability. This method applies to an owner or operator of Portable or Fixed Unit that is required to measure air velocity to demonstrate that Air Pollution Control Device meets the Capture Velocity requirements in subdivisions (e) and (f).

2. Apparatus

2.1 Anemometer. The anemometer shall be capable of measuring the inward face air velocity in feet per minute (fpm) within an appropriate velocity range with an accuracy within +/- 10% of full scale. The anemometer shall be operated and calibrated per the manufacturer's recommendations.

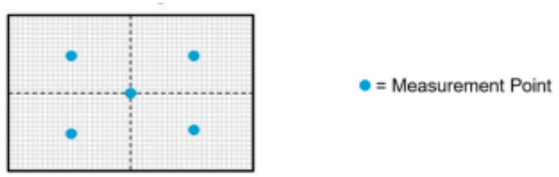
3. Testing Conditions

3.1 Equipment Operation. The test shall be conducted while the Air Pollution Control Device is in normal operation and under typical conditions representative of the Facility's laser or plasma arc Metal Cutting operation, including any limits on the size of a downdraft table vent area included in a permit condition. Precautions should be taken by the Facility to evaluate any potential physical hazards to ensure the Capture Velocity air measurement test is conducted in a safe manner.

3.2 Cross Draft. The test shall be conducted under typical draft conditions representative of the Facility's Metal Cutting operations. This includes cooling fans and openings affecting draft conditions around the Metal Cutting area including, but not limited to, vents, windows, doorways, bay doors, and roll-ups, as well as the operation of other work stations and traffic.

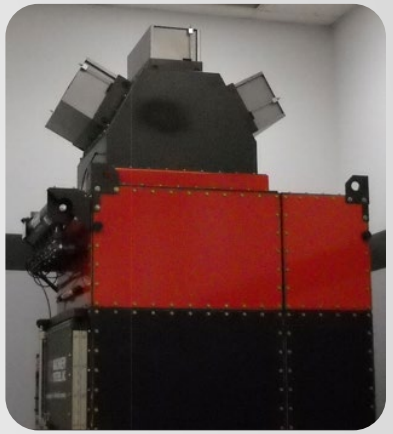
4. Procedure

4.1 Air Pollution Control Devices for a Fixed Unit: The Capture Velocity measurements shall be conducted at the Metal Cutting plane (i.e., the point where Metal Cutting occurs) of the laser or plasma arc Metal Cutting equipment over a five-point grid pattern (see below). Capture Velocity tests can be conducted with a workpiece on the Metal Cutting table to represent typical operating conditions.



AFFECTED FACILITIES

- Approximately 185 Facilities operate a total of 292 Units
  - Subject to PR 1445 general requirements (e.g., housekeeping, limiting Building openings, recordkeeping)
  - 92% the Facilities operate Filter-Based Air Pollution Control Devices and would be subject to parametric monitoring and best management practices
- Fixed Units: Up to 100 Units may need to upgrade or install an Air Pollution Control Device
- Portable Units: Up to 40 Units may need upgrade or install an Air Pollution Control Device



Socioeconomic Impact Assessment and California Environmental Quality Act (CEQA)

SOCIOECONOMIC IMPACT ASSESSMENT

Socioeconomic Impact Assessment

- Required for a proposed rule or rule amendment which “will significantly affect air quality or emissions limitations” [Health and Safety Code Section 40440.8]
- Will be prepared for PR 1445 which will consider:
    1. Type of affected industries, including small businesses
    2. Range of probable costs, including costs to industry or business
    3. Impact on employment and regional economy
- Will be made available at least 30 days prior to the Public Hearing on November 1, 2024 (subject to change)

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

- PR 1445 is a project subject to CEQA
- South Coast AQMD, as lead agency, is reviewing the proposed project to determine if it will result in any potential adverse environmental impacts
- Appropriate CEQA documentation will be prepared based on the analysis

KEY DATES

Action	Date
Written Comments Due	**September 12, 2024**
Stationary Source Committee	September 20, 2024
Set Hearing	October 4, 2024
Public Hearing	November 1, 2024

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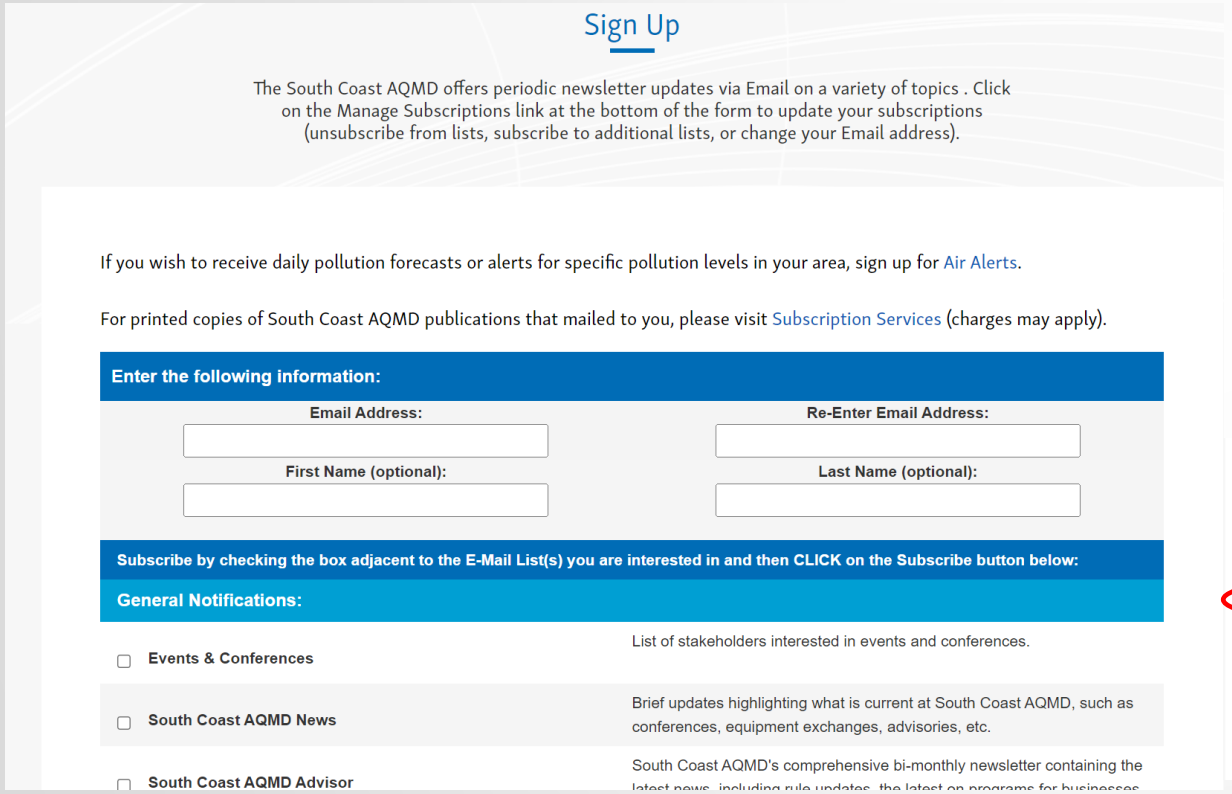

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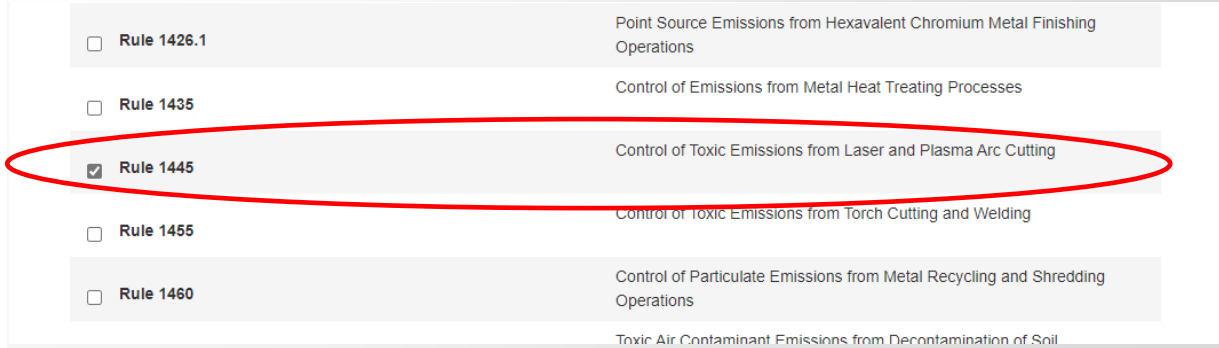

☐ Rule 1426.1	Point Source Emissions from Hexavalent Chromium Metal Finishing Operations
☐ Rule 1435	Control of Emissions from Metal Heat Treating Processes
☑ Rule 1445	Control of Toxic Emissions from Laser and Plasma Arc Cutting
☐ Rule 1455	Control of Toxic Emissions from Torch Cutting and Welding
☐ Rule 1460	Control of Particulate Emissions from Metal Recycling and Shredding Operations
	Toxic Air Contaminant Emissions from Decontamination of Soil