



Proposed Rule 1407.1 (PR 1407.1) Control of Toxic Air Contaminant Emissions from Chromium Alloy Melting Operations

**Public Workshop
October 14, 2020**

Join Zoom Meeting

<https://scaqmd.zoom.us/j/94824744031>

Meeting ID:

948 2474 4031

Passcode:

223340

Phone:

1-669-900-6833

Background

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- Currently no source-specific rule to address emissions from chromium alloys such as stainless steel, alloy steel, and superalloys
 - Chromium alloys contain toxic air contaminants which have the potential to be emitted during metal melting
 - Melting of metals containing chromium can generate hexavalent chromium
- Staff initiated rulemaking to address chromium alloys in metal melting operations; however, additional emissions data was needed
- In 2018, the California Metals Coalition identified three facilities that volunteered to conduct source testing
- Once source testing was completed, re-initiated rulemaking for Proposed Rule 1407.1

Regulatory History

November 2015 – Proposed Amended Rule (PAR) 1407 Rule Development

- Initiated rule development to expand the applicability to address chromium and non-chromium metal melting operations

April 2018 – Bifurcated Rulemaking

- PAR 1407 – Address non-chromium metal melting
- PR 1407.1 – Address chromium metal melting

April 2018 to December 2018 – PR 1407.1 Rule Development

- Additional emissions data needed for chromium metal melting operations

December 2018 – PR 1407.1 Source Testing

- California Metals Coalition identified three facilities that would volunteer to conduct source testing

February 2020 – Re-Initiated PR 1407.1 Rulemaking

- Source testing completed and re-initiated rulemaking

Public Process

- 10 Facilities Visited
- 12 Working Group Meetings
 - 7 Working Group Meetings during initial rulemaking
 - 5 Working Group Meetings following re-initiation of rulemaking



Preliminary Draft Rule Language

Purpose (a)

- Reduce toxic air contaminant emissions from chromium alloy melting operations

CHROMIUM ALLOY MELTING OPERATION (c)(12)

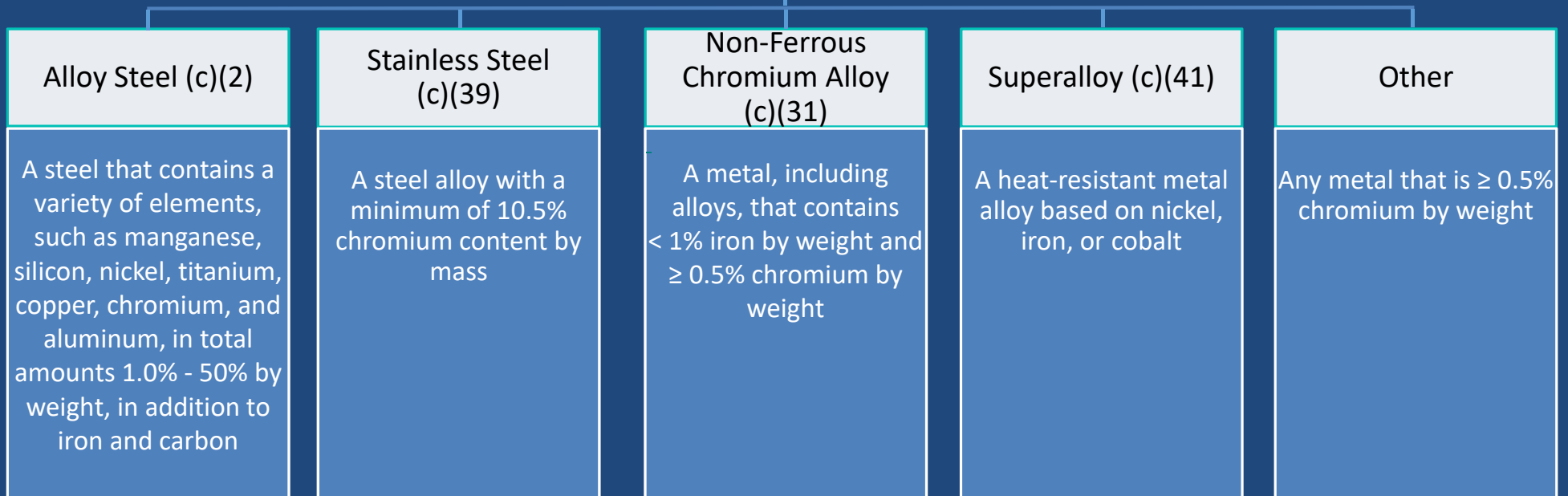
- Any process conducted where chromium alloy is melted, poured, casted, and finished
- Includes chromium alloy melting, casting, casting material removal, metal grinding, and metal cutting



Chromium Alloys

- Chromium Alloy includes any metal that has a chromium content greater or equal to 0.5%, including alloy steel, stainless steel, non-ferrous chromium alloy, superalloy, or other alloy

Chromium Alloy (c)(9)



Applicability (b)

- Owner or operator of a facility conducting chromium alloy melting, including
 - Primary and secondary smelters
 - Foundries
 - Die-casters
 - Mills
 - Other miscellaneous melting processes



Definitions (c)

- Definitions that are used in other toxic metal rules are incorporated in PR 1407.1 to clarify and explain key concepts, equipment, activities, and processes related to chromium alloy melting
- Certain PR 1407.1 definitions are new or have been modified
 - Aggregate Hexavalent Chromium Emissions
 - Alloy Steel
 - Approved Cleaning Methods
 - Building
 - Casting Material
 - Chromium Alloy
 - Chromium Alloy Melting Facility
 - Chromium Alloy Melting Operation
 - Dry Sweeping
 - Dust Suppressing Sweeping Compound
 - Maintenance and Repair Activity
 - Non-Ferrous Chromium Alloy
 - Rerun Scrap
 - Scrap
 - Stainless Steel
 - Steel
 - Superalloy
 - Used Casting Material

Aggregate Hexavalent Chromium Emission Limits (d)(1)

- All chromium alloy melting furnaces and associated emission control devices would be required to meet the aggregate hexavalent chromium emission limit
 - **Aggregate (c)(1)** means sum of the hexavalent chromium mass emissions in milligrams per hour from all chromium alloy melting furnaces and associated emission control devices
- Distance to nearest sensitive receptor measured at the time permit application is deemed complete with South Coast AQMD
 - **Distance to Sensitive Receptor** measured from stack or centroid of stacks to nearest property line of closest sensitive receptor

Effective: July 1, 2024

Table 1: Aggregate Hexavalent Chromium Emission Limits

Distance to Sensitive Receptor (meters)	Aggregate Hexavalent Chromium Emission Limit (milligrams per hour)
Less than 50	0.40
50 to 100	1.5
Greater than 100	1.8

Emission Collection System (d)(2)



- Effective July 1, 2024
- Operate the emission collection system at a minimum capture velocity as specified in the most current edition of the *Industrial Ventilation: A Manual Recommended Practice for Design*, published by the American Conference of Governmental Industrial Hygienists at the time the permit application is deemed complete

Visible Emissions (d)(3) & (d)(4)

- Do not discharge any air contaminant from any activity associated with chromium alloy melting operations into the air for more than 3 minutes per hour that is:
 - Half as dark or darker than Number 1 on the Ringelmann Chart
 - 10% opacity or more
- Ensure visible emissions do not escape from the collection location(s) of an emission collection system(s)

Permitting (d)(5)

- By January 1, 2022, submit:
 - Change in permit conditions for permitted chromium alloy melting furnaces and emission control devices to reconcile with PR 1407.1 requirements
 - Permit applications for previously Rule 219 exempt chromium alloy melting furnaces and emission control devices
 - Permit applications for construction of new or modified emission control devices



Prohibitions (e)

- Melting non-ferrous chromium alloys containing more than 0.002% arsenic by weight and 0.004% cadmium by weight
- Installing a new stack or modifying an existing stack to allow emissions to be released in a horizontal direction
- Use of weather caps on vertical stacks associated with chromium alloy melting operations

NON-FERROUS CHROMIUM ALLOYS (c)(31)

Includes cobalt- and nickel-based superalloys, cobalt-chromium-tungsten alloys, and aluminum-, copper-, lead-, and zinc-based alloys that contain at least 0.5% chromium by weight

Material Storage and Transport (f)(1)(A) – (f)(1)(G)

Effective July 1, 2021

Store dust-forming chromium alloy-containing materials* and waste in closed leak-proof containers, unless being stored within a building at least 20 feet away from an opening

* Includes rerun scrap and used casting material

Store scrap in an enclosed storage area or in a building at least 20 feet away from an opening

Transport chromium alloy-containing materials* in closed leak-proof containers, unless being transported within a building

* Includes rerun scrap and casting material

Collect materials captured by an emission control device into sealed leak-proof containers

Close containers at all times, except when material is being actively deposited or actively removed

Keep containers free of liquid and dust leaks

Enclose all filter media of emission control devices at all times, except for unused filter media

SCRAP (c)(35)

- Any metal material that has been discarded or removed from its end use and is intended for reprocessing

RERUN SCRAP (c)(33)

Excluded from
SCRAP
definition

- Generated as a result of the casting or forming process
- Intended for remelting and has not been coated or surfaced with any material
- Generated at the chromium alloy melting facility or generated offsite from materials produced at the chromium alloy melting facility
 - If generated offsite, documentation required

USED CASTING MATERIAL (c)(42)

- Material that has been exposed to molten metal in the casting process (e.g. sand, plastic, ceramic, plaster, and clay)

CASTING MATERIAL (c)(8)

- Material that is used to form the mold or core assembly in the casting process

Routine Cleaning (f)(1)(H) & (f)(1)(I)

Effective July 1, 2021

Using an approved cleaning method, clean:

- | | |
|--------|---|
| Daily | All floor areas within 20 feet of: <ul style="list-style-type: none">• Chromium alloy melting operation(s) |
| Weekly | All floor areas within 20 feet of: <ul style="list-style-type: none">• Placement or storage of raw materials, scrap, rerun scrap, dross, slag, ash, and finished products• Emission collection system and emission control device• Equipment for handling, mixing, reclaiming, or storing casting material• Storage, disposal, recovery, or recycling of waste generated from used casting material, housekeeping activities, construction and maintenance and repair activities on buildings, and material(s) captured by emission control device• Any entrance or exit point of a building that houses chromium alloy melting operation(s) and an enclosed storage area |

APPROVED CLEANING METHOD (c)(3)

- Cleaning with wet wash, wet mop, damp cloth, or low pressure spray
- Sweeping with use of dust suppressing sweeping compounds
 - Added sweeping with use of dust suppressing sweeping compound to Approved Cleaning Method
- Vacuuming with HEPA vacuum

DUST SUPPRESSING SWEEPING COMPOUND (c)(17)

- Non-grit-, oil- or waxed, hygroscopic, or water-based materials used to minimize dust from becoming airborne during sweeping

Additional Routine Cleaning (f)(1)(J) – (f)(1)(N)

Effective July 1, 2021	
Using an approved cleaning method, clean:	
Quarterly	Inspect for and clean blockages from accumulated dust in vents, openings, and ducting of each emission control device
Every Six Months	All floor areas outside of the building subject to foot or vehicle traffic
Annually	Entire facility, including any area not specified in cleaning provisions
Every Two Years (June – September)	All roof areas of buildings housing chromium alloy melting operation(s)
Within an Hour	Any construction or maintenance and repair activity

Additional Housekeeping Provisions (f)(2) & (f)(3)

- Prohibition of dry sweeping or compressed air cleaning in areas where chromium alloy melting operation(s) occur
- Option to use an approved alternative housekeeping measure in lieu of an approved cleaning method
 - Needs to meet the same air quality objective and effectiveness of the housekeeping requirement it is replacing

Building Requirement (g)(1)



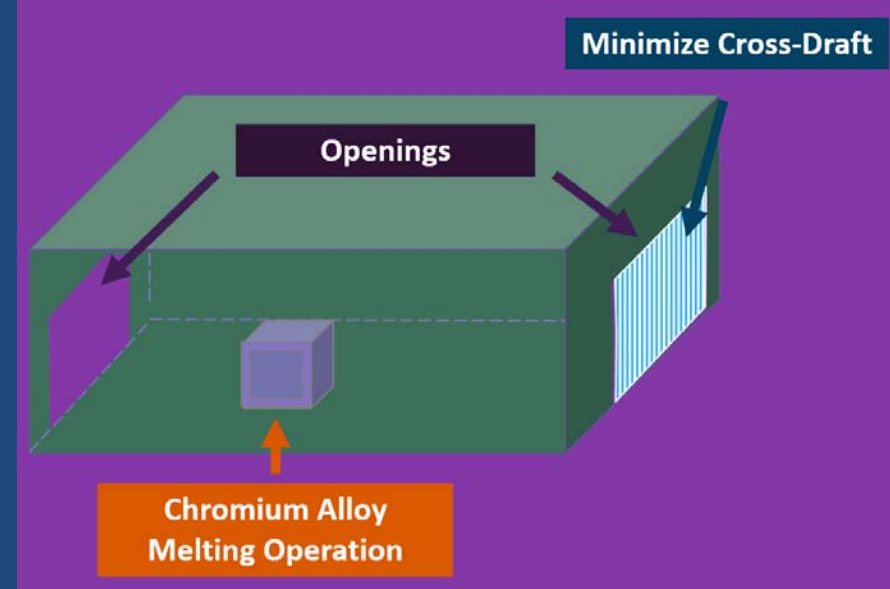
- Effective July 1, 2021
- Conduct all chromium alloy melting operations in a building

BUILDING (c)(5)

A type of enclosure that is a structure, enclosed with a floor, walls, and a roof to prevent exposure to the elements

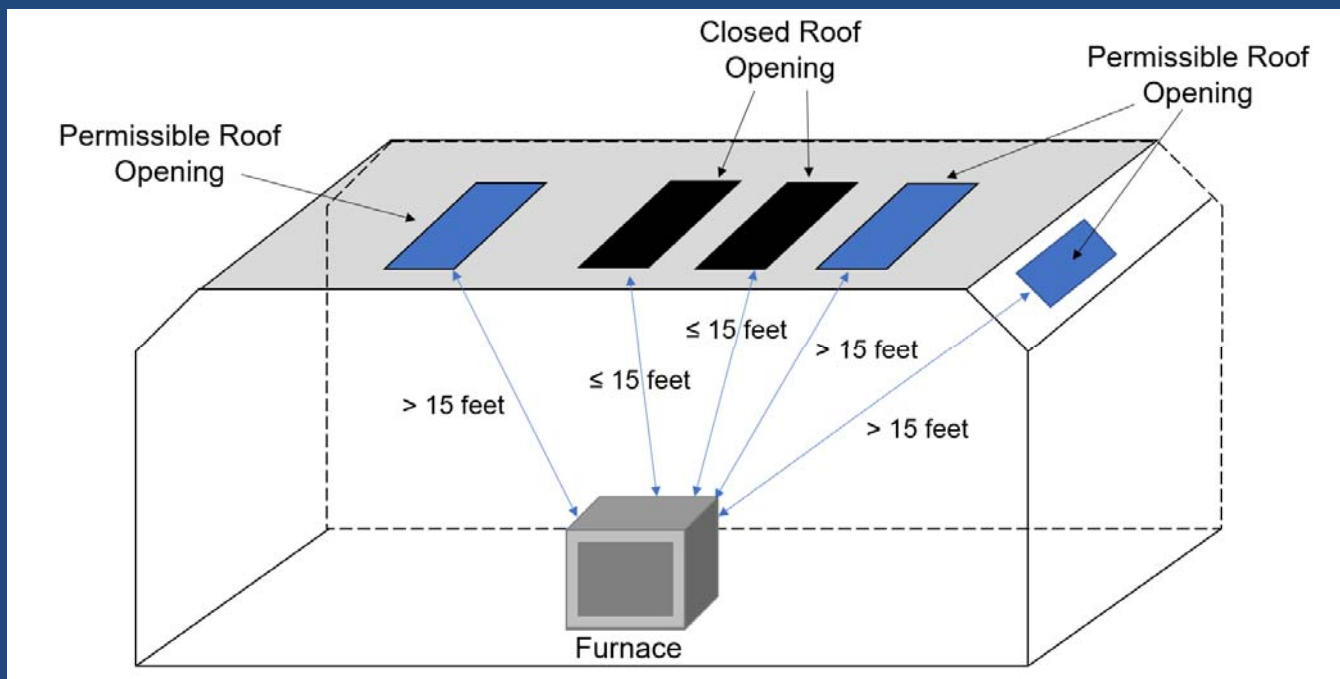
Cross-Draft Minimization (g)(2)

- Effective January 1, 2022, if the building has openings that are on opposite ends of the building, close at least one end, using one or more of the following:
 - Automated doors
 - Overlapping plastic strip curtains
 - Vestibules
 - Barrier
 - Airlock system
 - Alternative methods approved by Executive Officer



Closing Roof Openings (g)(3)

- Effective January 1, 2022
- Close all roof openings located ≤ 15 feet above the edge of a chromium alloy melting furnace or where molten metal is poured and cooled



Worker Safety Conflicts (g)(4)

- If building requirements conflict with worker safety regulations set forth by OSHA, Cal/OSHA, or other municipal codes or agency:
 - Facility may use alternative building compliance measures that have been approved, in writing, by the Executive Officer
 - Alternative building compliance measures must meet the same air quality objective and effectiveness of the building compliance requirement it is replacing
 - Must implement approved alternative building compliance measures within 90 days of approval

Source Testing Requirements (h) – Key Provisions



- Conduct source tests to determine compliance with:
 - Aggregate hexavalent chromium emission limits for all chromium alloy melting furnaces and associated emission control device(s)
 - Smoke test requirement
 - Minimum velocity of the emission collection system
- Source Test Frequency
 - Initial Source Test
 - Periodic Source Test
 - Failed Parameter Monitoring Source Test

Source Test Protocol (h)(2)

Submit within 90 days of source test due date or issuance of Permit to Construct

Source Test Protocol shall include:

Source test criteria, all assumptions, and required data

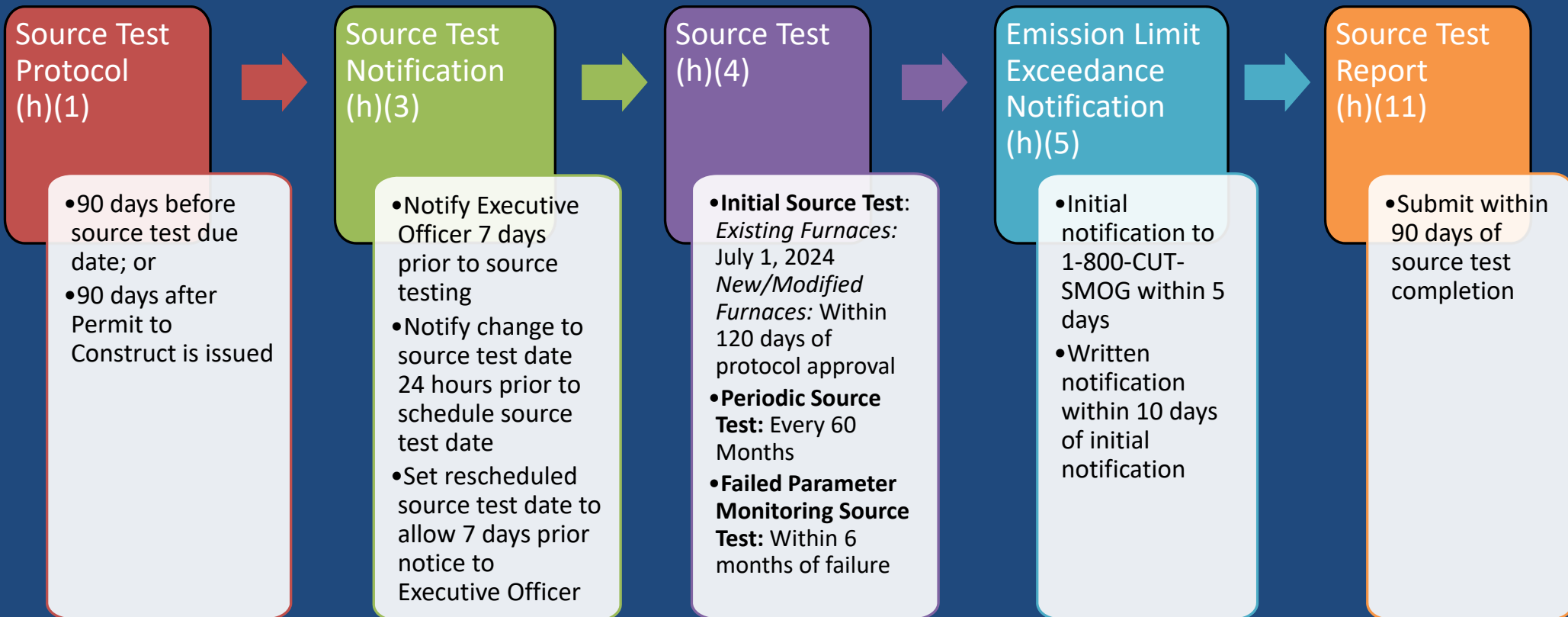
Calculated target hexavalent chromium emissions in milligrams per hour

Planned sampling parameters

Evaluation of the capture efficiency and velocity of the emission collection system

Information on equipment, logistics, personnel, and other resources necessary to conduct source test

Source Testing Schedule



Failed Parameter Monitoring Source Testing (h)(4)(D)

- Conduct a source test within 6 months if facility:
 - Does not conduct any of the parameter monitoring requirements, at the required frequency, or with a calibrated and properly operating monitoring device
 - Does not stop operation of furnace associated with the emission control device or emission collection system that failed a parameter monitoring requirement
 - Operations must stop within 24 hours of failure and until the emission control device or emission collection system passes the parameter monitoring requirement
 - Fails any one parameter monitoring requirement three consecutive times

Source Test Methods (h)(6) – (h)(9)

- Source Test Method
 - CARB Method 425: *Determination of Total Chromium and Hexavalent Chromium Emissions from Stationary Sources*
 - Conduct source tests representative of typical operating conditions
- Alternative Source Test Method
 - May use approved alternative or equivalent source test methods
- Must use test laboratories approved under South Coast AQMD Laboratory Approval Program for test methods cited
 - If no approved laboratory, then approval of testing procedures by laboratory may be granted on case-by-case basis
- When more than one source test method is specified:
 - Source test method selected is subject to approval
 - Violation of the specified source test method(s) will constitute a violation of the rule

Existing Source Tests (h)(10)

- Existing source tests conducted within last 3 years prior to rule adoption
 - May be used as the initial source test if the source test meets the following criteria:
 - Is the most recent source test conducted
 - Demonstrated compliance with the emission limit
 - Demonstrated compliance with smoke test and capture velocity for emission collection system
 - Conducted using applicable and approved test methods and laboratories
 - Source test report was evaluated and approved by the Executive Officer

Material Testing Requirements (i)

- Determine the weighted percentage of arsenic and cadmium contained in all materials melted in non-ferrous chromium alloy melting furnaces
 - Excludes rerun scrap and outside material with documentation confirming $<0.002\%$ arsenic and $<0.004\%$ cadmium
 - In lieu of material testing, may use documentation, such as metallurgical assays, certificates of analysis of material specification sheets
- Use the most applicable test method for the sample matrix, method detection limit, and interferences
 - U.S. EPA-approved methods
 - Active ASTM International methods
 - South Coast AQMD-approved alternative methods



Four Areas of Parameter Monitoring



Bag Leak Detection System

Identifies potential breach or blockage with bag



Measure Pressure Across the Filter Media

Identifies potential breach or blockage with filter media



Smoke Test to Observe Air Flow

Ensures air from source is moving towards control device



Verify Collection Efficiency

Ensures capture velocity is maintained

Effective July 1, 2024

Parameter Monitoring – Baghouse (j)(1)



Bag Leak Detection System

Measures relative particulate matter emissions and activates alarm when change in particle mass loading is detected

- Require bag leak detection system for all baghouses, regardless of size and position if connected in series with other emission control devices
- Bag leak detection system to be operated, calibrated, and maintained in accordance with Tier 3 requirements of Rule 1155 – Particulate Matter (PM) Control Devices

Parameter Monitoring – Filter Media (j)(2)



Pressure Gauge

Continuously monitors pressure drop across filter media of the emission control device

- Use a gauge to measure pressure differential across each filter stage of the emission control device
- Maintain pressure drop within range specified by manufacturer or according to conditions of Permit to Operate
- Position gauge so that it is easily visible and in clear sight
- Gauge should be:
 - Calibrated at least once every calendar year and maintained in accordance with manufacturer's specifications
 - Equipped with a continuous data acquisition system (DAS) that records pressure data output at least once every 60 minutes and generates file of data output each calendar day

Parameter Monitoring – Air Flow (j)(3)



Smoke Test

Conducted to demonstrate emissions from a source are moving towards the control device

- Conduct and pass smoke test during each source test, and once every 180 days after the initial source test
 - Use procedure in Attachment A – Smoke Test to Demonstrate Capture Efficiency for Emission Collection Systems of an Emission Control Device

Parameter Monitoring – Collection Efficiency (j)(4)



Velocity

Minimum feet per minute of air flow into the collection location of the emission collection system that ensures 100% collection efficiency

- Measure and record velocity once every 180 days
- Use and keep onsite calibrated anemometer to measure the velocity for each intake of the emission collection system
- Maintain capture velocity specified for specific emission collection design, or at least 95% of minimum velocity according to conditions of Permit to Operate

Protocol for Reporting and Correcting Failed Measurements (j)(5) & (j)(6)

Report within 24 hours to
1-800-CUT-SMOG:

Cumulative hours of BLDS alarm activation
exceeds 5% of total operating hours

Average pressure across a filter stage is not
maintained within specified range

DAS fails to record or generate data from
gauge

Failed smoke test

Anemometer reading shows required
velocity is not maintained

Within 24 hours of discovering parameter
monitoring failure and until device passes
the required parameter monitoring, stop
operating associated furnace if fail to:

Minimize BLDS alarm activation

Maintain average pressure across a filter
stage within specified range

Record or generate data from the gauge using
a DAS

Pass smoke test

Maintain required velocity

DAS Failure and Missing Data (j)(7)

- If DAS fails due to an emergency beyond the facility's control (e.g. power outage, computer malfunction):
 - Restore DAS to working condition no later than 24 hours after end of the emergency
 - At least once every 8 hours until DAS is restored:
 - Manually record the data output from the gauge associated with the non-operational DAS, or
 - If the associated gauge is not operating due to the emergency, record the pressure as measured by a mechanical gauge
- Period of missing DAS data due to the emergency will not be subject to compliance determination for failed parameter monitoring provisions

Unreasonable Risk (j)(8)

- If the smoke test or velocity measurement cannot be conducted due to an unreasonable risk to safety:
 - Use an alternative parameter monitoring measure that has been approved by the Executive Officer in a source test protocol
 - If the Executive Officer determines that there is no safe alternative, the facility is no longer subject to that smoke test or velocity measurement requirement

Recordkeeping Requirements (k)

Keep and maintain records of the following for five years

- Quarterly quantities of raw materials processed, including purchase records
- Material testing data
- Source test protocols and reports
- Housekeeping activities conducted
- Maintenance and repair and construction activities
- Inspection, calibration documentation, and maintenance of emission control devices and parameter monitoring equipment
- Parameter monitoring data
- Reporting log of failed parameter monitoring to 1-800-CUT-SMOG
- Documentation of repairs or replacements performed to correct failed parameter measurement

Keep on-site and make available to South Coast AQMD upon request

Exemptions (I)

- Exempt from all rule requirements except recordkeeping
 - Facilities that melt less than 1 ton of chromium alloy(s) per year
- Exempt from all rule requirements
 - Educational facilities (i.e. universities, colleges, schools)
 - Jewelers
 - Equipment subject to Rules 1420.1 and 1420.2
 - Lead facilities with separate chromium alloy melting equipment would be subject to both Rule 1420.1/1420.2 and PR 1407.1 requirements
 - Brazing, dip soldering, and wave soldering
 - Metal cutting and metal grinding performed for maintenance and repair activities on equipment and structures not associated with chromium alloy melting operations

Attachment A – Smoke Test to Demonstrate Capture Efficiency for Emission Collection Systems of an Emission Control Device

1.2. Principle

- Mass emissions at exhaust of an emission control device is related to capture efficiency of the emission collection system
- A smoke generator will reveal the capture efficiency

2.1. Smoke Generator

- Must be adequate to produce a persistent stream of visible smoke (e.g. Model S102 Regin Smoke Emitter Cartridges)

3. Testing Conditions

- Smoke test must be conducted during normal operating and typical draft conditions (e.g. cooling fans and enclosure openings)

Attachment A (continued)

4. Procedure

4.1. Collection Slots

- Smoke is to be released at points where emissions are generated
- At points < 12 inches apart across ventilated work areas

4.2. Equipment Enclosures

- Smoke is to be released at points outside of the plane of the opening of the equipment
- Evenly spaced matrix across all openings with points < 12 inches apart
- Acceptable test demonstrates a direct stream to the collection location(s) of the emission collection system without meanderings out of its direct path



5. Documentation

- Photographs or video at each point showing the path of the smoke
- List of equipment tested
- Any repairs that were performed in order to pass the smoke test
- Operating conditions, cross-draft conditions, and heat input of the equipment

Impacted Facilities

Universe of Facilities

- 11 facilities subject to PR 1407.1
 - Staff visited 10 facilities over past 4 years
- Facilities identified by reviewing the South Coast AQMD database, supplemented with:
 - Internet searches
 - Industry association contacts
 - Site visits

Exclusions

Heat treating or other metalworking facilities
that do not melt metal

Facilities that melt only non-chromium metals
Subject to Rule 1407

Facilities that melt lead-containing metals
Subject to Rules 1420, 1420.1 & 1420.2

Types of Facilities

NAICS Code	Facility Type	Number of Facilities
331110	Iron and Steel Mills and Ferroalloy Manufacturing	1
331512	Steel Investment Foundries	3
331513	Steel Foundries (except Investment)	4
331529	Other Nonferrous Metal Foundries (except Die-Casting)	2
332XXX	Fabricated Metal Product Manufacturing	1
Total Number of Facilities		11

Distribution of Facilities by Rule Status

Facility by Distance to Sensitive Receptor (meters)	Number of Affected Facilities	Installation of Plastic Strip Curtains*	Closing of Roof Openings*	Install New Emission Control Devices with HEPA/ULPA	Add HEPA/ULPA to Existing Emission Control Devices	Existing Emission Control Devices with HEPA
Less than 50	1	1/1	1/1	1/1 (may need to install ULPA)	NA	NA
50 to 100	1	1/1	1/1	NA	NA	1/1
Greater than 100	9	8/9	9/9	4/9	4/9	1/9

* Assumed for all facilities, unless staff was able to identify facilities that already complied with requirement

Estimated Total One-Time Costs by Expense Type

Expense Type	Present Worth Value (2020)		Annual Average (2021 – 2042)	
	1% Discount Rate	4% Discount Rate	1% Real Interest Rate	4% Real Interest Rate
Baghouse	\$2,542,000	\$2,145,000	\$130,000	\$152,000
Bag Leak Detection System	\$44,000	\$38,000	\$2,000	\$3,000
Anemometer	\$23,000	\$20,000	\$1,000	\$1,000
Pressure Gauge with DAS	\$78,000	\$67,000	\$4,000	\$5,000
Closing Roof Openings	\$166,000	\$162,000	\$8,000	\$11,000
HEPA	\$1,136,000	\$959,000	\$58,000	\$68,000
Install Butterfly Cap	\$22,000	\$19,000	\$1,000	\$1,000
Plastic Curtains	\$99,000	\$97,000	\$5,000	\$7,000
Rider HEPA Vacuum	\$157,000	\$128,000	\$8,000	\$9,000
ULPA	\$77,000	\$65,000	\$4,000	\$5,000
Backpack HEPA Vacuum	\$14,000	\$12,000	\$1,000	\$1,000
Shop HEPA Vacuum	\$19,000	\$15,000	\$1,000	\$1,000
Standard and Calibration Materials (Apply to 1 facility)	\$22,000	\$21,000	\$1,000	\$1,000
Total One-Time Cost	\$4,399,000	\$3,748,000	\$224,000	\$265,000

Estimated Total Recurring Costs by Expense Type

Expense Type	Present Worth Value (2020)		Annual Average (2021 – 2042)	
	1% Discount Rate	4% Discount Rate	1% Real Interest Rate	4% Real Interest Rate
Baghouse Annual Maintenance	\$25,885,000	\$18,702,000	\$1,323,000	\$1,323,000
HEPA Annual Maintenance	\$5,613,000	\$4,055,000	\$287,000	\$287,000
Housekeeping	\$218,000	\$160,000	\$11,000	\$11,000
Permit Renewal Fees	\$479,000	\$346,000	\$24,000	\$24,000
Recordkeeping	\$1,091,000	\$802,000	\$55,000	\$55,000
Replacement HEPA Filters for Shop Vacuum	\$467,000	\$337,000	\$24,000	\$24,000
Roof Cleaning	\$303,000	\$223,000	\$15,000	\$15,000
Slot Velocity Test	\$207,000	\$151,000	\$11,000	\$11,000
Smoke Test	\$2,320,000	\$1,691,000	\$118,000	\$118,000
Source Test	\$1,348,000	\$1,012,000	\$68,000	\$68,000
ULPA Annual Maintenance	\$728,000	\$526,000	\$37,000	\$37,000
Total Recurring Cost	\$38,659,000	\$28,005,000	\$1,973,000	\$1,973,000

Estimated Total One-Time and Recurring Costs

Cost Type	Present Worth Value (2020)		Annual Average (2021 – 2042)	
	1% Discount Rate	4% Discount Rate	1% Real Interest Rate	4% Real Interest Rate
Total One-Time Costs	\$4,399,000	\$3,748,000	\$224,000	\$265,000
Total Recurring Costs	\$38,659,000	\$28,005,000	\$1,973,000	\$1,973,000
Total	\$43,056,000	\$31,751,000	\$2,200,000	\$2,239,000

Estimated Total Costs by Facility Type

Facility by distance to sensitive receptor (meters)	Estimated affected facilities	Total cost if all PR 1407.1 expenses made in 2020	Annualized cost per facility*
Less than 50	1	\$7,009,000	\$364,000
50 to 100	1	\$743,000	\$39,000
Greater than 100	9	\$3,923,000	\$204,000

* Using 4% discount rate

Scope of Socioeconomic Impact Assessment

Applicable Legal Requirements for PR 1407.1

- California Health and Safety Code Section 40440.8
 - Requires socioeconomic impact assessment for proposed rule or rule amendment which “will significantly affect air quality or emissions limitations”
 - Socioeconomic impact assessment shall consider:
 - Type of affected industries, including small businesses
 - Range of probable costs, including costs to industry or business
 - Impact on employment and regional economy

Cost Considerations

- One-time compliance costs
 - Capital cost of new equipment (e.g. baghouse, HEPA/ULPA filters, plastic curtains, butterfly caps, bag leak detection system)
 - Permitting (e.g. baghouse with HEPA/ULPA filter and bag leak detection systems)
 - Monitoring (e.g. continuous pressure gauge with DAS for emission control devices, anemometer for emission collection systems)
 - Material Testing (e.g. standard and calibration materials)
- Recurring costs
 - Housekeeping (e.g. cleaning chromium alloy melting operation areas, quarterly inspections, slag/waste transport, roof cleaning)
 - Cost of operations (e.g. electrical cost to operate baghouse with HEPA/ULPA filter)
 - Permitting (e.g. annual renewals for baghouses with HEPA/ULPA filters and bag leak detection systems)
 - Monitoring (e.g. annual calibration of continuous pressure gauges and anemometer testing on emissions collection systems)
 - Reporting (e.g. source testing and smoke tests)
- Staff is looking for input on these and/or other costs

Proposed Key Assumptions

Analysis Horizon

- 2020 to 2042

Equipment Life

- Opening closures: 20 years
- Baghouse, HEPA/ULPA filter, and butterfly caps for exhaust stacks: 10 years
- Parameter monitoring devices: 10 years
- Housekeeping equipment: 6 years

California Environmental Quality Act

California Environmental Quality Act (CEQA)

- PR 1407.1 is a project subject to CEQA
- Decision to prepare 30-day Draft Environmental Assessment (EA)
 - Equivalent to a Negative Declaration
 - No significant impacts are expected with PR 1407.1
 - No CEQA scoping meeting is required to be held
 - Will contain project description (Chapter 1) and environmental checklist (Chapter 2) to evaluate the revised project's impacts on 18 topic areas
 - Analysis of alternatives and mitigation measures are not required
 - Will be released for 30-day public review period in November 2020
- Final EA
 - Will include responses to Draft EA comment letters and necessary modifications to Draft EA
 - Governing Board must certify Final EA

Next Steps

Written Comments Due	October 28, 2020
Stationary Source Committee	November 20, 2020
Set Hearing	December 4, 2020
Public Hearing	January 8, 2021

Proposed Rule 1407.1 Staff Contacts

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For more information: [PR 1407.1 Proposed Rules Web Page](#)

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