Proposed Amended Rule 1407

Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Chromium Metal Melting Operations

Public Workshop

June 19, 2019

Background

Regulatory History

1992
CARB Adopted Air Toxic Control Measure (ATCM) for Non-Ferrous Metal Melting

- Identified inorganic arsenic, cadmium, and nickel as carcinogens without identifiable threshold exposure levels
- Required non-ferrous metal melting facilities to apply best available control technology to capture and reduce emissions of particulate matter containing arsenic, cadmium, and nickel
- Included requirements for reduction of fugitive emissions

1994
South Coast AQMD Adopted Rule 1407 – Control of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations

- Rule 1407 implements CARB's ATCM for non-ferrous metal melting
- Required the reduction of arsenic, cadmium, and nickel by the installation of air pollution control equipment, parametric monitoring, and housekeeping practices
- Never amended since adoption

Need for Proposed Amended Rule 1407 (PAR 1407)

- Exemptions in Rule 1407 are overly broad
  - Metal or Alloy Purity Exemption
    - No throughput limitation
    - Facilities melting very large amounts of relatively contaminant free metal have the potential to pose a risk to the surrounding community
  - Clean Aluminum Scrap Exemption
    - Does not include limitations for arsenic, cadmium, or nickel content
    - The scrap may contain toxic air contaminants that increase risk to the surrounding community
- Include ferrous metal melting operations with arsenic, cadmium, and nickel emissions
  - Distinguish between chromium and non-chromium metal melting operations
  - Chromium metal melting to be regulated by Proposed Rule 1407.1 (PR 1407.1)
- Need to better address arsenic, cadmium, and nickel point source and fugitive emissions because of toxicity concerns

Health effects of Arsenic, Cadmium, and Nickel

Metal	US EPA Carcinogenicity Classification[1]	Target Organs for Health Effects with Chronic Exposure[2]
Arsenic	Carcinogenic to Humans	Inhalation & Oral: Development; cardiovascular system; nervous system; respiratory system; skin
Cadmium	Likely to be Carcinogenic to Humans	Inhalation: Kidney; respiratory system Oral: Kidney
Nickel	Carcinogenic to Humans	Inhalation: Respiratory system; hematologic system Oral: Development

1. California Office of Environmental Health Hazard Assessment, https://oehha.ca.gov/media/downloads/crnr/appendixa.pdf
2. California Office of Environmental Health Hazard Assessment, https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary

Public Process

- Thirty site visits
- Eight working group meetings
- Through public process many refinements made to rule concepts including:
  - Bifurcation of chromium (PR 1407.1) and non-chromium metal melting operations
  - Establishing mass emission limits to allow larger facilities to demonstrate compliance through source testing
  - Addressing concerns about total enclosures

Proposed Rule Language

Overview

- Rule language provides the details necessary for implementation of the rule
- Rule language based on initial rule concepts with input from stakeholders
- Presentation will highlight key provisions of proposed rule language

Purpose (subdivision (a))

- Reduce emissions of arsenic, cadmium, and nickel from non-chromium metal melting operations
  - (c)(24) Non-chromium metal is any metal that contains less than 0.5% by weight total chromium content on a monthly weighted average
  - Other South Coast AQMD rules will regulate toxic emissions from chromium or lead melting operations

Al & Al Alloys	Carbon Steel	Brass	Bronze	Lead	Stainless Steel	Alloy Steel	Superalloy
< 0.4% chromium	No minimum specification for chromium	Trace levels of chromium only	Trace levels of chromium only	Trace levels of chromium only	≥ 0.4% chromium	≥ 0.4% chromium	≥ 0.4% chromium
PAR 1407	PAR 1407	Rule 1420 or PAR 1407	Rule 1420 or PAR 1407	Rule 1420	PR 1407.1	PR 1407.1	PR 1407.1

Applicability (subdivision (b))

- Applies to non-chromium metal melting operations including:
  - Smelters (primary and secondary)
  - Foundries
  - Die-casters
  - Coating processes (galvanizing and tinning)
  - Dip soldering
  - Brazing
  - Aluminum powder production
- Includes grinding and cutting operations conducted at non-chromium metal melting facilities

Definitions (subdivision (c))

Adding

- Approved Cleaning Methods
- Bag Leak Detection System
- Building Enclosure
- Capture Velocity
- Emission Control Device
- Enclosure Opening
- Foundry
- Functionally Similar Furnace
- Low Pressure Spray
- Metal Cutting
- Metal Grinding
- Metal Removal Fluid
- Non-Chromium Metal

Modifying

- Emission Collection System
- Facility
- Fugitive Emissions (now Fugitive Metal Dust Emissions)
- Metal Melting Furnace
- Rerun Scrap

Removing

- District
- Emission Point
- Fine Particulate Matter
- Fugitive Emissions Control
- Good Operating Practices
- Non-Ferrous Metal
- Particulate Matter
- Fine Particulate Matter
- Particulate Matter Control System
- Person
- Process Emission Control

- Hard Lead, Pure Lead, & Type Metal*

* Removed from definitions and integrated into rule language

Emission Control Requirements (subdivision (d))
Existing Requirements

- Maintain requirements for visible emissions ((d)(6))
  - Do not discharge any air contaminant into the air for more than three minutes per hour that is:
    - Half as dark or darker than Number 1 on the Ringelmann Chart
    - ≥ 10% opacity
- Retain the following provisions until implementation of proposed emission limits ((d)(1), (d)(2), and (d)(5))
  - Vent all emission points to an emission collection system
  - Vent the gas stream from the emission collection system to a control device which reduces particulate emissions by 99%
  - Limit temperature of gas stream entering into the emission control device to < 360°F, unless 99% control can be demonstrated for arsenic and cadmium
    - This provision will be retained in Rule 1420.2

Emission Control Requirements (subdivision (d)) Proposed Requirements

- (d)(3) – By January 1, 2021, reduce emissions by 99% for each of the following toxic air contaminants: arsenic, cadmium, and nickel individually
- (d)(4) – In lieu of (d)(3), demonstrate facility-wide mass emissions from all non-chromium metal melting furnaces and associated emission control devices are less than the annual rate for each toxic air contaminant

Demonstration may be made for each toxic air contaminant individually

Toxic Air Contaminant	Option 1: (d)(3) Control Efficiency	Option 2: (d)(4) Annual Rate (lb/year)
Arsenic	99%	0.095
Cadmium	99%	0.74
Nickel	99%	12.2

Mass Emission Rates

- Allows facilities that do not qualify for the purity exemption and without controls to demonstrate that the facility has low emissions
  - Also provides source test cost savings due to needing only a source test at the inlet as opposed to the inlet and outlet of the source
- Developed using annual screening cancer rates obtained from South Coast AQMD Permit Application Package “N”, Version 8.1, Table 1
  - Based on a screening cancer risk of 25 in a million for a receptor located 100 meters from the source
  - Screening cancer risk is a conservative estimate, assumes:
    - The receptor is located in the downwind direction
    - Worst-case meteorological conditions
    - Low stack height (14 – 25 feet)

Housekeeping Requirements (subdivision (e))

- Housekeeping provisions reduce fugitive metal dust emissions

Housekeeping Requirement	Current 1407	PAR 1407
(e)(1)(A) – Store dust-forming metal-containing materials in an enclosed storage area, building enclosure, or covered container	Yes	Yes
(e)(1)(B) – Discharge materials from emission control device into closed containers or an enclosed system	Yes	Yes
(e)(1)(C) – Weekly cleaning	Yes	Yes
(e)(1)(D) – Prohibition of dry sweeping or compressed air cleaning	No	Yes

Effective upon date of rule adoption

Housekeeping Requirements (subdivision (e)) *continued*

- New housekeeping provisions to reduce fugitive metal dust emissions

Housekeeping Requirement	Current 1407	PAR 1407
(e)(2)(A) – Quarterly inspection, and cleaning if necessary, of collection vents, openings, and ducting of emission control devices	No	Yes
(e)(2)(B) – Remove weather caps from stacks	No	Yes
(e)(2)(C) – Transport slag, housekeeping waste, and building enclosure construction and maintenance materials in covered containers	No	Yes
(e)(2)(D) – Weekly cleaning of cutting and grinding operations	No	Yes
(e)(2)(E) – Store slag, housekeeping waste, and building enclosure construction and maintenance materials in an enclosed storage area, building enclosure, or covered container	No	Yes
(e)(2)(F) – Clean within one hour after construction or maintenance	No	Yes

Effective 30 days after rule adoption

Housekeeping Requirements (subdivision (e))
Key Definitions

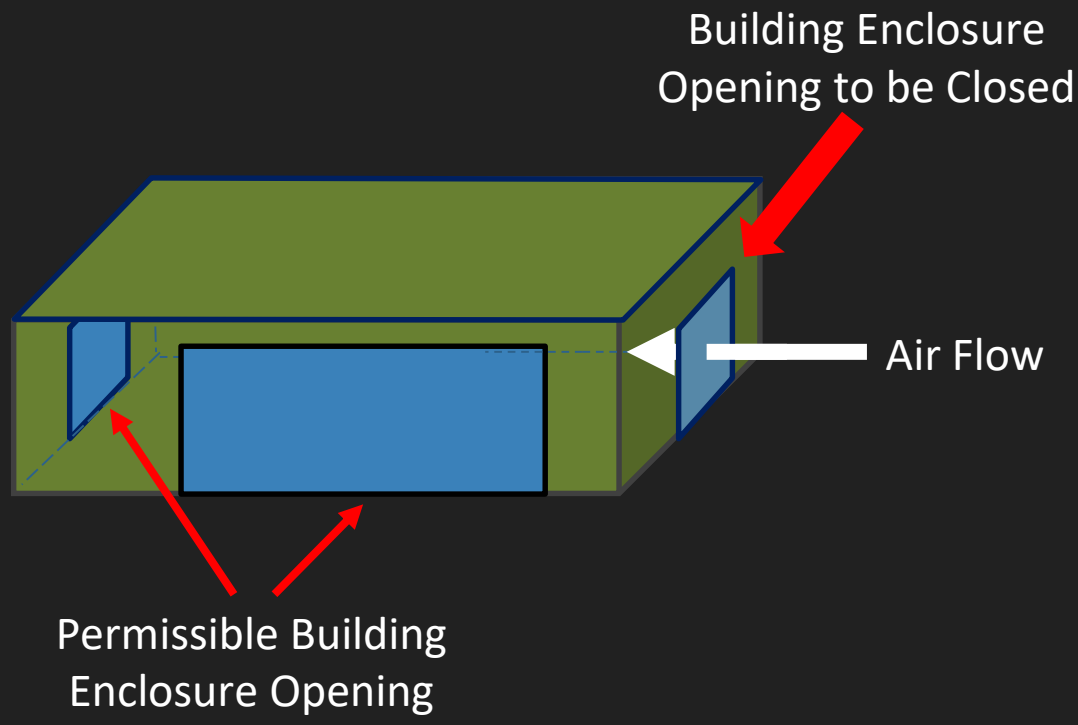
- (c)(2) – Approved cleaning consists of wet wash, wet mop, damp cloth, low pressure spray, or vacuum equipped with filter(s) rated by the manufacturer to achieve a 99.97% control efficiency for 0.3 micron particles
- (c)(18) – Metal cutting is abrasively cutting ingot, log, billet stock, castings, or formed parts not conducted under a continuous flood of metal removal fluid
- (c)(19) – Metal grinding is grinding ingot, log, billet stock, castings, or formed parts not conducted under a continuous flood of metal removal fluid
- (c)(22) – Metal removal fluid is used at the tool and workpiece interface to facilitate the removal of metal from the part, cool the part and tool, extend the life of the tool, or to flush away metal chips and debris
  - Does not include minimum quantity lubrication fluids used to coat the interface with a thin film and minimize heat buildup through friction reduction. Minimum quantity lubrication fluids are applied by pre-coating the tool in the lubricant, or by direct fine mist application

Building Enclosure Requirements (subdivision (f))

- Current Rule 1407 has no building enclosure requirements
- Benefits of building enclosures:
  - Minimizes cross-drafts
  - Provides secondary containment of fugitive emissions
  - Optimizes collection efficiency of control devices
- (c)(4) – Building enclosure
  - Building or physical structure, or portion of a building
  - Enclosed with a floor, walls, and a roof
  - Limited openings to allow access for people, vehicles, equipment, or parts
  - Openings to the exterior and on opposite ends of the building enclosure cannot be simultaneously open

Building Enclosure Requirements (paragraphs (f)(1)&(f)(2))

- Effective July 1, 2020
  - (f)(1) – Conduct all metal melting operations in a building enclosure
    - Including metal grinding or cutting not
  - (f)(2) – If the building enclosure 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
    - Airlock system
    - Barrier (e.g. large piece of equipment)
    - Alternative methods approved by Executive Officer



Building Enclosure Compliance Plan (paragraphs (f)(3)-(f)(5))

- Provisions included to provide substitute for building enclosure

(f)(3) – If building enclosure is in conflict with other agency requirements related to worker safety, facility must notify the Executive Officer and submit a Building Enclosure Compliance Plan

(f)(4) and (f)(5) – Process for approval and appeal of Building Enclosure Compliance Plans

(f)(5) – Once the Building Enclosure Compliance Plan is approved by the Executive Officer

- Existing facilities must implement within 90 days
- New facilities must implement prior to start-up

Recordkeeping (subdivision (g))

Records will assists in verifying compliance

(g)(1)*	(g)(2)*	(g)(3)	(g)(4)*	(g)(5)	(g)(6)	(g)(7)	(g)(8)
Monthly	Monthly	Quarterly	Every 60 months	Weekly	On-going	Every 6 months	Every 6 months
Type and quantity of raw materials processed, including purchase records	Content of arsenic, cadmium, chromium, and nickel in raw materials	Analyses reports of baghouse catches	Source test results	House-keeping activities completed	Data acquisition system information from parametric device monitoring	Slot velocity test results	Smoke test results

- Records to be maintained for 3 years, with the 2 most recent onsite, and made available to South Coast AQMD upon request
  - Current Rule 1407 requires 2 years

* Required by current Rule 1407

Source Testing (subdivision (h))

- Source testing establishes control efficiency or mass emission rates of emission control devices and furnaces

Source Testing for Existing Emission Control Devices and Furnaces

(h)(1) – Source Test Protocol
- 60 days prior to conducting source test

(h)(6) – Source Test Notification
- 1 week prior to source testing
- 24 hours prior to cancelling or rescheduling

(h)(2)/(h)(3) – Source Test
- (h)(2) – Initial Source Test: January 1, 2021
- (h)(3) – Periodic Source Test: Every 60 Months

(h)(7) – Violation Notification
- Within 5 days to 1-800-CUT-SMOG
- Within 10 day of notification to Executive Officer

(h)(13) – Source Test Report
- Within 90 days of source test

Source Testing (subdivision (h)) *continued*

Source Testing for New or Modified Emission Control Devices and Furnaces

(h)(5) – Source Test Protocol

- 90 days after Permit to Construct is issued

(h)(6) – Source Test Notification

- 1 week prior to source testing
- 24 hours prior to cancelling or rescheduling

(h)(5)/(h)(3) – Source Test

- (h)(5) – Initial Source Test: Within 120 days of source test protocol approval
- (h)(3) – Periodic Source Test: Every 60 Months

(h)(7) – Violation Notification

- Within 5 days to 1-800-CUT-SMOG
- Within 10 day of notification to Executive Officer

(h)(13) – Source Test Report

- Within 90 days of source test

Source Testing (subdivision (h))
Key Provisions

- (h)(4) – Functionally Similar Furnaces
  - The emission rate established by the source test results of an uncontrolled furnace may be applied proportionately to all uncontrolled functionally similar furnaces at the facility
  - (c)(16) – Functionally similar furnace is a furnace used for metal melting that is the same type of furnace (electric, induction, cupola, reverberatory, etc.) used at a facility to melt the same alloys
  - Substantially reduces potential source test costs
- (h)(12) – Previously Conducted Source Tests
  - Existing source tests conducted on or after January 1, 2016 for an existing emission control device may be used as the initial source test specified if the source test meets the following criteria:
    - Is the most recent source test
    - Demonstrates compliance with limits in PAR 1407
    - Source test conducted according to source test requirements in PAR 1407

Source Test Protocol
(subparagraphs (h)(1)(A) – (h)(1)(E))

Source test protocol must include:

- Source test criteria, all assumptions, and required data
- Calculated target arsenic, cadmium, and nickel concentrations or mass emission standards
- Planned sampling parameters
- Information on equipment, logistics, personnel, and other resources necessary to conduct an efficient and coordinated source test
- Evaluation of the emission collection system

Source Testing Requirements (subdivision (h))

- (h)(8) – Conducted while operating at a minimum of 80% of permitted capacity
- (h)(8) – In accordance with California Air Resources Board (CARB) Method 436 – Determination of Multiple Metal Emissions from Stationary Sources
  - (h)(9) – Alternative or equivalent method may be used upon approval
- (h)(10) – Testing laboratories must be approved under the South Coast AQMD Laboratory Approval Program
  - Alternative testing procedures may be used upon approval
- (h)(11) – When more than one source test method specified:
  - Source test method selected is subject to approval
  - Violation of the specified source test method(s) will constitute a violation of the rule

Applicable Material Testing Methods (subdivision (i))

- Material testing is necessary to determine the composition of alloys
- PAR 1407 will maintain all, but one, material testing method
- PAR 1407 will remove the test method for pig lead analysis
  - ASTM E 117-64 (1985) "Standard Method for Spectrographic Analysis of Pig Lead by the Point-to-Plane Technique"

Emission Control Device Monitoring (subdivision (j))

- Parametric monitoring ensures that emissions control devices are operating properly
- Effective January 1, 2021
  - (j)(1) – Bag leak detection system for baghouses subject to Rule 1155 – Particulate Matter (PM) Control Devices
  - (j)(2) – Mechanical gauge for the pressure across the filter of an emission control device
  - (j)(3) – Source testing is required if pressure across the filter is out of specification for more than the following:
    - A 4-hour time period on three or more separate days over 60 consecutive days; or
    - Any consecutive 24-hours
  - (j)(4) – Operate emission collection systems at a minimum capture velocity as specified in Industrial Ventilation: A Manual of Recommended Practice for Design
  - (j)(5) – During source testing and once every 6 months thereafter, smoke test using the procedures in Attachment B
  - (j)(6) – Every 6 months, use a calibrated anemometer to measure the slot velocity and pressure at each push air manifold

Exemptions (subdivision (k))
Existing Exemptions

- Retain exemption (k)(1) and (k)(6)
  - Facilities that melt less than one ton per year are only subject to recordkeeping provisions (subdivision (g))
  - Equipment used to convey aluminum are only subject to housekeeping, building enclosure, and recordkeeping provisions (subdivision (d), (h), and (j))
- Maintain exemptions (k)(2), (k)(4), and (k)(5) until January 1, 2021
  - Facilities melting limited materials based on Table 1, exempt from emission control and emission control device monitoring for provisions (subdivisions (d) and (j))
  - Furnaces exclusively melting aluminum to produce extrusion billets, exempt from emission control, source testing, and emission control device monitoring (subdivisions (d), (h), and (j))
  - Reverbatory furnaces with a charging well that melt solely aluminum, exempt from emission control, source testing, and emission control device monitoring (subdivisions (d), (h), and (j))

Exemptions (subdivision (k))
Proposed Exemptions

- (k)(8) – Metal grinding or metal cutting operations conducted under a continuous flood of metal removal fluid are exempt from building enclosure provisions (paragraphs (f)(1) and (f)(2))
- (k)(9) – Metal grinding or metal cutting operations conducted during repair or maintenance activities are exempt from PAR 1407

Exemptions (subdivision (k))
Revised Exemptions

- (k)(3) – Facilities that melt less than 8,400 tons/year of non-chromium metal that has less than 0.004% cadmium and 0.002% arsenic and no more than 1% scrap, will be exempt from emission control, source testing, and emission control device monitoring for provisions (subdivisions (d), (h), and (j))
- (k)(7) – Rule 1420 series equipment and operations are exempt from PAR 1407
  - Rule 1420 – Emissions Standard for Lead
  - Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Facilities
  - Rule 1420.2 – Emissions Standards for Lead from Metal Melting Facilities

High Temperature Exhaust Requirements at Rule 1420.2 Facilities

- Rule 1420.2 applies to large lead melting operations
  - Requires 99% control of particulate matter
  - Does not specify control efficiency of arsenic or cadmium
- Currently, Rule 1407 paragraph (d)(5) (previously (d)(3)) applies to large lead melting operations
  - Requires demonstration of 99% control for arsenic and cadmium if temperature of gas stream entering into the emission control device is ≥ 360°F
- PAR 1407 (k)(7) proposes to exempt Rule 1420.2 facilities
  - In order to preserve all aspects of the ATCM, the high temperature requirements in Rule 1407 (d)(5) will be transferred to Rule 1420.2
  - All aspects of the ATCM must be preserved
  - Rule 1420.2 will be amended to include high temperature exhaust requirements

Attachment B – Smoke Test to Demonstrate Capture Efficiency for Emission Collection Systems of an Emission Control Device Pursuant to Paragraph (j)(5)

1.2. Principle

- Emission control efficiency 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 B
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

- Approximately 54 facilities subject to PAR 1407
  - Staff has visited 30 facilities over past 3 years
- Facilities identified by review of permits, business classification (North American Industry Classification System), and web search

Exclusions

Equipment used for lead melting
Subject to 1420 series rules

Facilities melting less than one ton per year
Jewelers, artists, schools

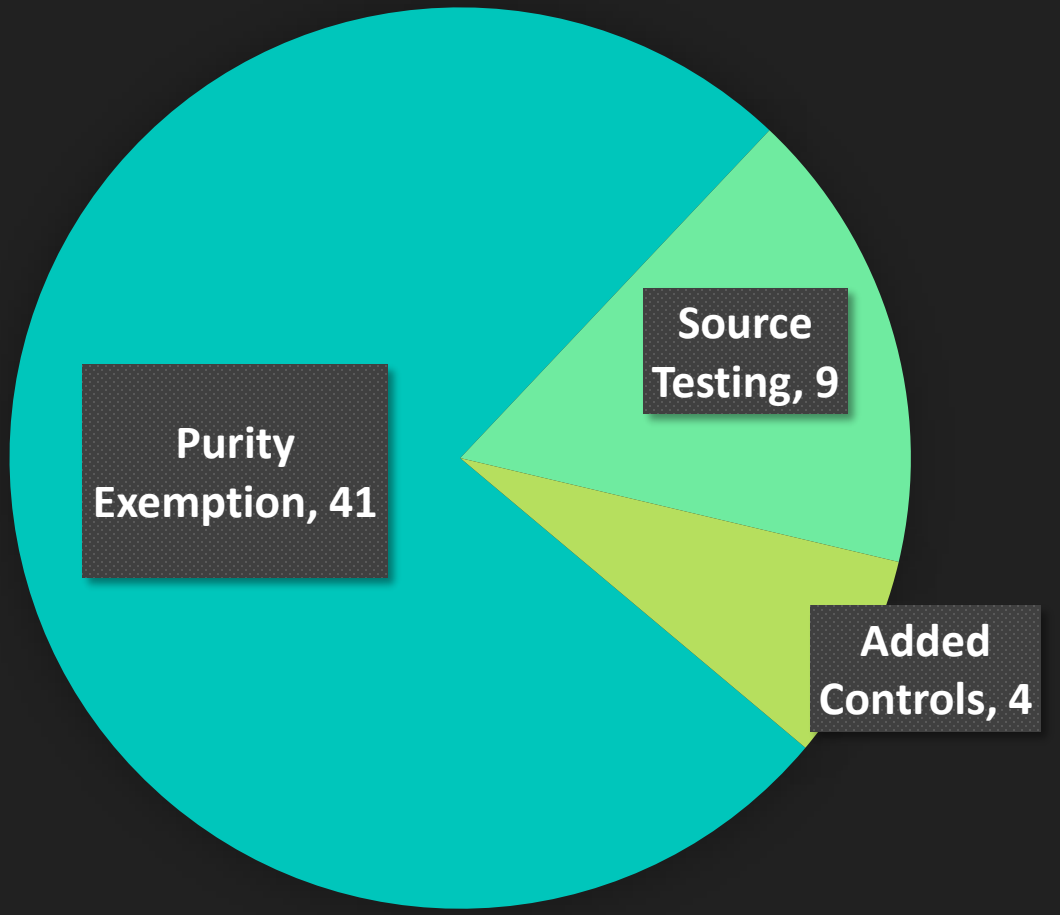
Equipment used for chromium metal melting
Subject to PR 1407.1

Types of Facilities

NAICS Code	Facility Type	Number of Facilities
331221	Galvanizing of metal (steel) tubing	1
331222	Drawing steel wire and galvanizing	3
331314	Aluminum alloys made from scrap or dross/ Secondary smelting and alloying of aluminum	5
331511	Iron Foundry	5
331513	Steel Casting	1
331523	Non-ferrous metal die-casting foundries (except aluminum)	12
331524	Aluminum foundries/castings (except die-casting)	24
331529	Other non-ferrous metal foundries, including brass and bronze (except die-casting) – zinc ingot manufacturing	2
332111	Melting of alloy steel to manufacture die forgings	1
	Total Number of Facilities	**54**

Distribution of Facilities by Rule Status

- Staff requested process and raw materials data
  - Received information from 30 facilities (59%)
    - Remaining facilities are smaller and primarily utilize ingots (no external scrap)
  - Most facilities (76%) will qualify for purity exemption; only the largest will need to demonstrate compliance with mass emission limit or added controls



Estimating Building Enclosure Impacts

- All 54 facilities melting > 1 ton per year must meet building enclosure requirements
- Building Enclosure upgrade estimations based on site visit observations
  - All 13 larger sites projected to require “Source Testing” and “Adding Controls” were visited
  - 17 of 41 smaller sites projected to utilize “Purity Exemption” were visited; building enclosure status extrapolated from visits

Distribution of Facilities by Building Enclosure Status

- Address Doors or Openings means that minor modifications including rollup doors, plastic strip curtains, or similar measures needed
- Construction means that one or more walls will need to be constructed

Facility Type	Number of Facilities	No Construction	Address Doors or Openings	Construction
Utilizing Purity Exemption	41	26	15	0
Requiring Source Testing	9	5	3	1
Requiring Added Controls	4	0	1	3

Estimated Total Costs by Expense Type

Expense Type	Number of Facilities	Cost	Total Cost	Annualized Cost
Minor Building Upgrades	19	$272,000	$5.2 million	$639,000
Enclosures	4	$340,000	$1.4 million	$172,000
Source Test	21 source tests at 13 facilities	$20,000 (every 60 months)	$84,000 annually	$84,000
Control Device	10 control devices at 4 facilities	$131,000 ($65,000 annually)	$1.3 million (plus $650,000 annually)	$810,000
Pressure Gauge	19 gauges at 8 facilities	$90,000	$1.7 million	$209,000
Data Acquisition System	19 systems at 8 facilities	$22,500	$0.4 million	$49,000
Anemometer	8	$6,375	$0.1 million	$6,000
Smoke Test	19 tests	$3,200 (annually)	$61,000 (annually)	$61,000
			TOTAL Annualized Cost	**$2,030,000**

Estimated Total Costs by Facility Type

Expense Type	Small Facility Processing < 8,400 Tons Per Year	Small Facility Processing < 8,400 Tons Per Year with Minor Building Upgrade	Small Facility Processing < 8,400 Tons Per Year With Existing Control Device	Large Facility Processing Low-As and Low-Cd Metals	Large Facility With Installation of New Control Device
Estimated Number of Facilities	26	13	2	9	4
Minor Building Upgrade	$0	$272,000	$272,000	$272,000	$0
Enclosures	$0	$0	$0	$0	$340,000
Source Test	$0	$0	$20,000	$20,000	$40,000
Control Device	$0	$0	$0	$0	$131,000 (plus $65,000 annually)
Pressure Gauge	$0	$0	$90,000	$0	$90,000
Data Acquisition System	$0	$0	$22,500	$0	$22,500
Anemometer	$0	$0	$6,375	$0	$6,375
Smoke Test	$0	$0	$3,200 (annually)	$0	$3,200 (annually)
Total Cost (10 years)	$0	$272,000	$443,000	$292,000	$1,312,000
Annualized Cost	$0	$33,000	$54,000	$36,000	$161,000

Scope of Socioeconomic Impact Assessment

Applicable Legal Requirements for PAR 1407

- 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
    - Impact on employment and regional economy
    - Range of probable costs, including costs to industry or business

Cost Considerations

- One-time compliance costs
  - Capital cost of new equipment (e.g. baghouse, building enclosures, container coverings, bag leak detection system)
  - Permitting (e.g. baghouse and bag leak detection systems)
  - Monitoring (e.g. continuous pressure monitor for emission control devices)
- Recurring costs
  - Housekeeping (e.g. cleaning furnace and casting operation areas, quarterly inspections, slag/waste transport)
  - Cost of operations (e.g. electrical cost to operate baghouse)
  - Permitting (e.g. annual renewals for baghouses and bag leak detection systems)
  - Monitoring (e.g. annual calibration of continuous pressure monitors and anemometer testing on emissions collection systems)
  - Reporting (e.g. source testing for metal-melting furnaces and smoke tests)
- Staff is looking for input on these and/or other costs

Proposed Key Assumptions

- Analysis horizon: 2020 to 2045
- Equipment life:
  - Building enclosure 20 years
  - Baghouse 10 years
  - Continuous pressure monitoring 10 years

California Environmental Quality Act

California Environmental Quality Act (CEQA)

- PAR 1407 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 PAR 1407
  - No CEQA scoping meeting is required to be held
  - Analysis of alternatives and mitigation measures are not required
  - Will contain project description (Chapter 1) and environmental checklist (Chapter 2) that evaluates 18 environmental topic areas
  - Will be released for 30-day public review period summer 2019
- Final EA
  - Will include responses to Draft EA comment letters, if any, and additional modifications to Draft EA, if needed
  - Governing Board must certify Final EA

Key Dates

Action	Date
Written Comments Due	July 10, 2019
Stationary Source Committee	July 26, 2019
Set Hearing	July 12, 2019
Public Hearing	September 6, 2019

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