Proposed Amended Rule 1407 Control of Emissions of Arsenic, Cadmium and Nickel from Non-ferrous Metal Melting Operations

Working Group #1

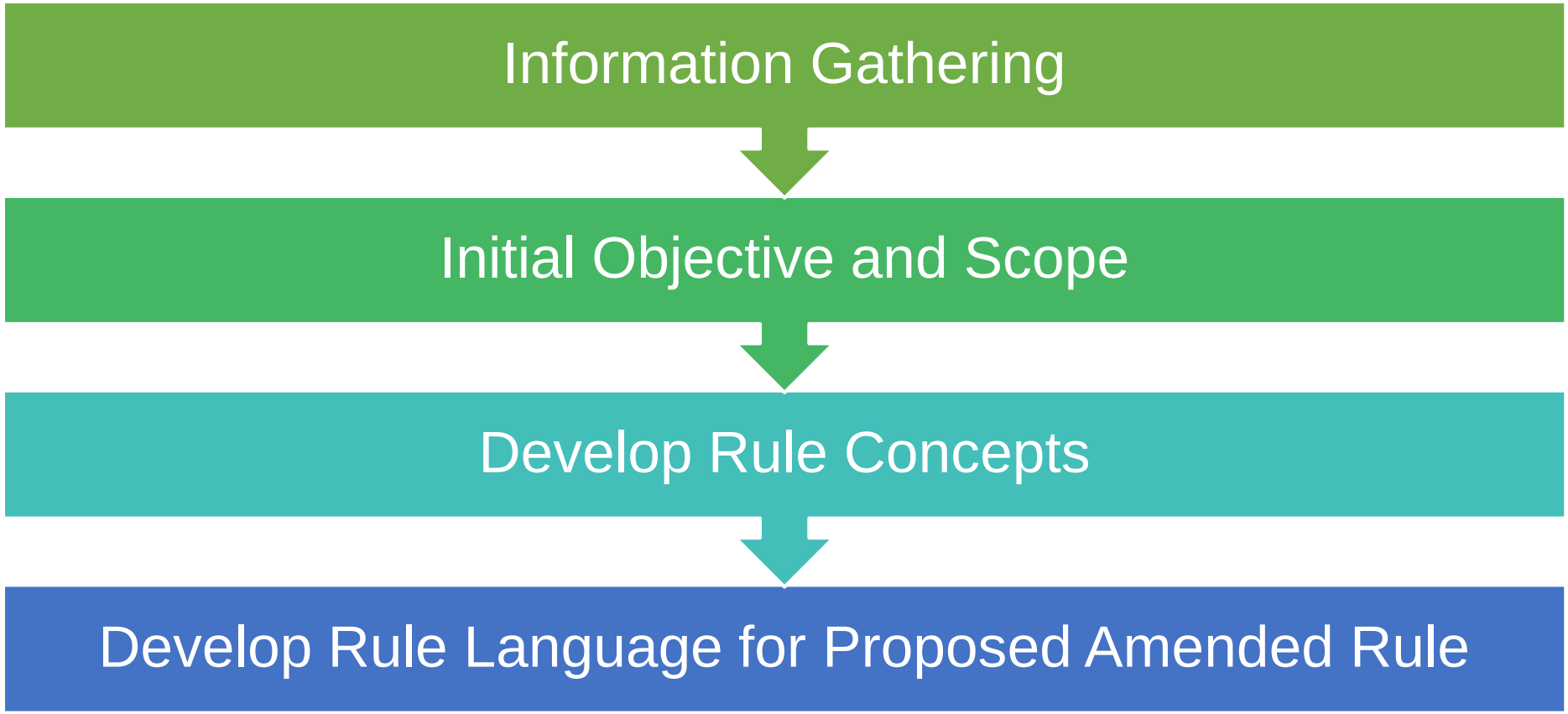
September 5, 2017

South Coast AQMD

Stakeholder Working Group

- Comprised of stakeholders including industry, environmental groups, community members, and agencies
- Working group meetings held throughout the rule development process and open to the public
- Provides stakeholders opportunity to discuss elements of proposed rule with staff
- Assist staff in understanding
  - Key issues and concerns
  - Industry terms, industry practices, etc.

General Overview of Rulemaking Process



Background

- Adopted in July 8, 1994
- Rule 1407 has not been amended since its adoption
- Metal melting operations including metal smelters, foundries, die-casting, etc. can generate fugitive metal particulate emissions during melting and other operations
- Measures such as building enclosures, enhanced housekeeping, and point source controls help minimize toxic metal emissions, most of which are fugitive

Existing Rule 1407

Purpose

Reduce emissions of arsenic, cadmium, and nickel

Applicability

Non-ferrous metal melting operations

Requirements

- PM control system
- Fugitive emissions
- Compliance Plan
- Recordkeeping

Exemptions

- Small Quantity
- Metal or Alloy Purity
- Aluminum
- Rule 1420

Existing Requirements
PM Emission Collection System

- Shall reduce particulate emissions by at least 99% from all emission points
- Determine control efficiency with SCAQMD Method 5.2 – Determination of Particulate Matter Emissions From Stationary Sources Using Heated Probe and Filter
- Use good operating practices to maintain air movement and efficiency
- Demonstrate good operating practices through a maintenance program and use of measure devices (flow meter, pressure gauge, broken bag detector, temperature gauge)

Existing Requirements
Fugitive Emission Control

- Visible Emissions Standard
- Store dust-forming material in an enclosed storage area
- Collect material from PM control system into closed containers or an enclosed system
- Vacuum or wet mop surfaces subject to vehicular and foot traffic

Existing Exemptions

- Small Quantity Exemptions
  - Melts less than one ton per year of all non-ferrous metals
  - Less than exemption limit listed in Table I of rule
- Metal or Alloy Purity
  - 0.004% cadmium
  - 0.002% arsenic
- Aluminum
  - Clean aluminum scrap
  - Aluminum scrap furnaces
  - Aluminum pouring
- Rule 1420 – Emissions Standard for Lead

Proposed Amended Rule 1407
Potential Universe

- Reviewed SCAQMD permitting databases to:
  - Identify industry categories based on Standard Industrial Classification (SIC) Codes
  - Identify equipment lists for facilities in each SIC category based on basic equipment that could be related to metal-melting
- Reviewed inspection reports to compile information not included in permitting database of equipment lists
- Searched for new potential facilities to capture all emission sources

Potentially Affected Facilities

Foundry Type	Facilities
Aluminum	28
Aluminum and Zinc	5
Aluminum and Aluminum Scrap	6
Aluminum and Iron	1
Aluminum and Magnesium	2
Zinc	1
Various Non-Ferrous	10
Ferrous (w/ stainless steel)	7
Non-Ferrous & Ferrous (w/ stainless steel)	7
Total	**67**

Breakdown of Furnaces

Furnace Type	Quantity
Crucible	16
Cupola	1
Electric Induction and Resistance	77
Pot	9
Reverb	38
Other	18
Unpermitted	> 180

- Majority of permitted furnaces did not require particulate control device
- Many of the permitted control devices have not been source tested for particulate emissions

Site Visits and Surveys

- Overall objective is to identify:
  - Current best management practices and housekeeping practices
  - Existing pollution controls
  - Additional emissions sources
  - Where additional pollution controls are needed
  - Types of alloys and volumes processed
  - Raw material and final product specifications

Proposed Amended Rule 1407
Site Visits

- Visited approximately 25 facilities
- Observations
  - Housekeeping
    - Variation in the schedule and housekeeping measures
  - Point Sources
    - Very few point sources vented to air pollution control devices
  - Fugitive Emission Sources
    - Few facilities stored dust-forming materials in enclosed areas
    - Often dross, slag, and metal debris not contained
  - Enclosures
    - Most facilities conducted operations in partial enclosures (one major section of wall open)
  - Air Pollution Control Devices
    - Many facilities with ducting and hoods in poor condition

Schedule

• Additional Working Groups	TBD
• Site Visits	Ongoing
• Public Workshop	December 2017
• Stationary Source Committee	January 19, 2018
• Set Hearing	February 2, 2018
• Public Hearing	March 2, 2018

SCAQMD Contacts

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General Questions

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