Agenda

- Rule Development Updates
- Previous Working Group Meeting
  - Summary
  - Stakeholder Comments
- Continuation of Rule Concepts
  - Fugitive Emission Requirements
- Next Steps
Rule Development Updates

- Facilities A and C Source Test Results are posted on South Coast AQMD Proposed Rule 1407.1 Web Page
- Public Hearing moved from November 6, 2020 to December 4, 2020
Summary of Previous Working Group Meeting
Summary

- Rule Concepts for Point Source Control Requirements
  - Proposed hexavalent chromium point source standards

<table>
<thead>
<tr>
<th>Sensitive Receptor</th>
<th>Sensitive Receptor</th>
<th>Sensitive Receptor</th>
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<tbody>
<tr>
<td>&lt; 50 Meters (lb/hr)</td>
<td>50 – 99 Meters (lb/hr)</td>
<td>≥ 100 Meters (lb/hr)</td>
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<tr>
<td>8.9E-07</td>
<td>3.3E-06</td>
<td>4.0E-06</td>
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- Collection efficiency to follow recommendations set forth in the *Industrial Ventilation: A Manual of Recommended Practice for Design* by the American Conference of Governmental Industrial Hygienists
- Metal content limits for arsenic and cadmium for non-ferrous chromium alloy melting furnaces
  - No more than 0.002% arsenic and 0.004% cadmium
Will staff consider establishing a small quantity exemption?

Small quantity exemptions will be discussed in the next working group meeting.

Will staff evaluate control technology and implementation costs for the more stringent proposed mass emission standard?

Cost impacts will include installation of HEPA at most facilities and installation of ULPA at the facility with a sensitive receptor < 50 meters.
Rule Concepts for
Fugitive Emission Requirements
General Overview of PR 1407.1

Today’s Meeting
Presenting rule concepts for Fugitive Emission Requirements
Fugitive sources are generally those emissions that are not collected through air pollution control devices and can accumulate on surfaces in and around the facility.

- Fugitive emissions can be contained and collected and vented to pollution control devices.

Point sources are stationary sources that are generally a single identifiable emission point from which pollutants are discharged.

- Point sources can also be a source of fugitive emissions.
  - Emissions that do not make it to the pollution control device or are not captured through the filter media are fugitive emissions.
Possible Sources of Fugitive Emissions

- Metal Particulate Inside the Facility
- Metal Particulate Outside the Facility
- Vehicular Traffic
- Foot Traffic
- Windows, Vents, and Other Wall Openings
- Large Openings for Ingress and Egress
- Openings in Roof
- Storage and Handling of Materials
Fugitive emissions within a building can be tracked out via foot traffic and vehicular traffic.

Cross-draft conditions within a building can contribute to fugitive emissions if airflow interferes with the collection efficiency.

Fugitive emissions can land on surfaces outside of a facility – roof tops, walkways, perimeter of facility – and can become airborne impacting surrounding community.

Fugitive emissions that land on surfaces can be re-entrained from foot traffic, vehicular traffic, wind, etc.
Approach for Addressing Fugitive Emissions

Two-pronged approach to address fugitive emissions
• Building enclosure measures to contain fugitive emissions
• Housekeeping measures to remove emissions before they can become fugitive

Housekeeping
Housekeeping provisions such as cleaning with approved cleaning methods at specific frequencies

Building Enclosures
Enclosure, with methods to minimize cross-drafts
Applicable Sources for Building Enclosures and Housekeeping

- Staff proposes that building enclosures and housekeeping measures apply to all areas where chromium alloy melting operations and other metal handling activities occur.

Collectively will refer to these as the “Metal Melting and Handling Operations”
Building enclosure requirements will apply to Metal Melting and Handling Operations
  · Require that Metal Melting and Handling Operations be conducted in a building enclosure

Building enclosure is a containment structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, with limited enclosure openings to allow access
  · A room within a building enclosure with a floor, walls, and a roof is also a building enclosure

Close all roof openings directly over metal melting operations except when moving equipment or parts through roof opening
Cross-Draft Minimization

- Ensure that any building enclosure opening where Metal Melting and Handling Operations occur that is on opposite ends of the building enclosure where air movement can pass through are not simultaneously open except during the passage of vehicles, equipment or people by closing or using one or more of the following methods:
  - Automated roll-up door
  - Overlapping plastic strip curtain
  - Vestibule
  - Airlock system
  - Alternative methods approved by the Executive Officer
Objective is to minimize air flow that can carry fugitive emissions from Metal Melting or Handling Operations out of the building.

Staff is not proposing a permanent total enclosure:
- Staff recognizes air flow in facility is needed for worker safety and comfort.
- Proposed concepts allow openings in building enclosure if not on opposite ends.

Examples of acceptable building enclosures with cross-draft minimization:
- Two enclosure openings
- Three enclosure openings
- Room within a building enclosure

Importance of Minimizing Cross-Drafts
Example 1: Two Enclosure Openings at Non-Opposing Ends

- Enclosure Openings (open passageway, vents, etc.)
- No Enclosure Openings (on back or right walls)
- Cross-Draft
- Metal Melting or Handling Operations

No additional cross-draft minimization required
Example 2: Two Enclosure Openings at Opposing Ends

Need to minimize potential cross-draft through enclosure openings on right and left walls.
Example 3: Three Enclosure Openings with Two on Opposing Ends

Need to minimize potential cross-draft through enclosure openings on right and left walls.
Example 4: Room within a Building Enclosure

Minimize Cross-Draft (strip curtains, automated roll-up door, vestibule, etc.)

Conducted in a room within the building enclosure

Need to minimize potential cross-draft through openings on right and left walls of room within building enclosure
Building Enclosures and OSHA Requirements

- If building enclosure requirements conflict with OSHA requirements, owner or operator can submit a Building Enclosure Compliance Plan
- Building Enclosure Compliance Plan should explain why there is a conflict and what alternative measures facility could implement to meet the same objective
- Similar to provisions in Rule 1407
Housekeeping measures are effective at reducing fugitive emissions when conducted routinely and using methods that minimize dispersion of fugitives.

- Housekeeping measures will apply to Metal Melting and Handling Operations.

- PR 1407.1 housekeeping provisions will be based on provisions included in other toxic rules that have been recently amended or adopted.
  - Approved cleaning methods
  - Routine cleaning
  - Cleaning spills
  - Waste collection and storage
Approved Cleaning Methods

- Approved cleaning methods:
  - Wet wash
  - Wet mop
  - Damp cloth
  - Low pressure spray nozzle
  - HEPA vacuum
  - Other alternative method as approved by the South Coast AQMD

- Prohibit dry sweeping and compressed air cleaning in areas where Metal Melting and Handling Operations are conducted
# Routine Cleaning – Daily and Weekly

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Clean Using an Approved Cleaning Method</th>
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<tbody>
<tr>
<td><strong>Daily</strong></td>
<td>All floor areas within 20 feet where:</td>
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<tr>
<td></td>
<td>• Metal melting and casting operations are conducted</td>
</tr>
<tr>
<td></td>
<td>• Metal grinding or cutting operations are conducted, unless conducted under continuous flow of metal removal fluid</td>
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<tr>
<td><strong>Weekly</strong></td>
<td>All floor areas within 20 feet where:</td>
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<tr>
<td></td>
<td>• Raw materials and finished products are placed or stored</td>
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<tr>
<td></td>
<td>• Emission control device dedicated to metal melting, casting, grinding, or cutting operations</td>
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<tr>
<td></td>
<td>• Sand handling equipment</td>
</tr>
<tr>
<td></td>
<td>• Metal-containing wastes from casting sand and housekeeping activities are stored, disposed of, recovered or recycled and material collected from emission control devices</td>
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<td></td>
<td>• Entrance/exit points of an enclosed storage area or building enclosure that houses melting, casting, grinding, or cutting operations</td>
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# Additional Routine Cleaning

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Clean Using an Approved Cleaning Method</th>
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<tbody>
<tr>
<td>Quarterly</td>
<td>Inspect collection vents, openings, and ducting of emission control devices, and clean or repair if necessary</td>
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<tr>
<td>Semi-Annually (Every 6 Months)</td>
<td>All floor areas of the facility outside of the building enclosure and where there is foot or vehicular traffic moving any metal or metal-containing waste such as raw materials, finished products, slag, dross, casting sand, waste from housekeeping activities, etc.</td>
</tr>
<tr>
<td>Annually</td>
<td>Entire facility, including enclosure corners and areas where metal-containing dust may deposit and not covered by routine cleaning provisions</td>
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<tr>
<td>Biennially (Every 2 Years, Summer)</td>
<td>All roof areas of the building enclosure</td>
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Additional Housekeeping Requirements

- Clean-up following maintenance or repair activities
- Storage and transport of metal-containing materials
- Emission control devices and exhaust stacks
Additional Requirements for Maintenance or Repair Activities

- Within one hour, use an approved cleaning method to clean areas where a maintenance or repair activity has occurred
  - Includes maintenance or repair activities on any emission control device or any duct section used to vent metal melting, casting, grinding, or cutting operations
Additional Requirements for Material Storage and Transport

- Store metal-containing casting sand, dross, ash, feed material, trash, or debris, etc. in an enclosed storage area, building enclosure, or sealed leak-proof container.

- Transport metal-containing casting sand, waste, dross, slag, and construction or maintenance materials in sealed leak-proof containers at all times, unless transported within a building closure.
Additional Requirements for Emission Control Devices and Exhaust Stacks

- Materials collected by emission control devices shall be discharged into a sealed leak-proof container.
- Filter media of emission control devices shall have housing and no exposure to external air.
- Vertical stack should be installed without a weather cap or rain cap.
- No horizontal stacks for new installations.
Staff proposes two-pronged approach to address fugitive emissions

- Building enclosures, with methods to minimize cross-drafts, to contain fugitive emissions
- Housekeeping measures to remove emissions in and around the facility before they can become fugitive
Summary of Proposed Building Enclosure Requirements

- Conduct all Metal Melting and Handling Operations in a building enclosure
- Minimize cross-drafts
- Close all roof openings directly over metal melting operation
- Option of Building Compliance Plan if conflicts with OSHA requirements
Summary of Proposed Housekeeping Requirements

- Daily cleaning in melting, casting, grinding, and cutting areas
- Weekly cleaning in entryways and storage, emission control device, and sand handling areas
- Quarterly inspection of collection vents, openings, and ducting of emission control devices
- Semi-annual cleaning of outside floor areas and areas exposed to foot and vehicular traffic
- Annual cleaning of entire facility
- Biennial cleaning of roof areas
Next Working Group Meeting

Presenting rule concepts for Emissions Testing and Recordkeeping Requirements and Exemptions
Next Steps

<table>
<thead>
<tr>
<th>Next Working Group Meetings</th>
<th>August – September 2020</th>
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<tr>
<td>• Present remaining rule concepts</td>
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<tr>
<td>• Preview Preliminary Draft Rule Language</td>
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<tr>
<td>Public Workshop</td>
<td>September 2020</td>
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<tr>
<td>Stationary Source Committee</td>
<td>October 16, 2020</td>
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<td>Set Hearing</td>
<td>November 6, 2020</td>
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<tr>
<td>Public Hearing</td>
<td>December 4, 2020</td>
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For more information:

PR 1407.1 Proposed Rules Web Page

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