Proposed Rule 1430
Control of Emissions from Metal Grinding Operations at Metal Forging Facilities

Working Group Meeting #6
February 1, 2017
Summary of Key Revisions

- Four key revisions:
  1. Modification to triggers for installation of negative air for total enclosures
  2. Hexavalent chromium source test
     - Added criteria for exempting hexavalent chromium source test
  3. Provisions to ensure continuous compliance of point source controls:
     - Continuous data logger
     - Additional source testing if persistent issues with HEPA
  4. Odor reducing contingency measures
     - If facility triggers specific criteria, must implement odor reducing measures
- Other revisions to improve clarity, address stakeholder comments, and ensure consistency
Triggers for Total Enclosure with Negative Air

- Modified triggers for installation of negative air for total enclosures
- Negative air required if property line of facility is:
  - 500 feet from property line of a sensitive receptor; or
  - 1,000 feet from property line of school or “early head start schools, head start schools, and preschools”
- Increasing distance from 300 to 500 feet consistent with CARB Land Use Handbook – more health protective
- Removed definitions for “sensitive receptor” and “school”
  - Incorporated definitions within requirements for total enclosures with negative air provisions
Hexavalent Chromium Source Testing

- Discussed concept in last working group to use analysis of baghouse catch for determining need for hexavalent chromium source test
- Added provision to allow facilities to be exempt from hexavalent chromium source test if baghouse catch is $\leq 1$ percent total chromium by weight
  - Must demonstrate that metal analysis by X-ray fluorescence of bulk samples conducted *from each removal or disposal* of the baghouse catch to is $\leq 1$ percent total chromium by weight
  - If any bulk sample is $>1$ percent of total chromium by weight, then must conduct hexavalent source test within 60 days, and every 48 months thereafter
  - If facility does not conduct bulk sample, required to conduct source test every 48 months
Ensuring Continuous Compliance

- Last Working Group Meeting received comment regarding need for mechanisms to ensure continuous compliance
- Added requirement to log pressure across HEPA using a continuous data acquisition system (DAS)
  - Provides mechanism for SCAQMD to verify monitored pressure across HEPA filter
- Pressure across HEPA filter must be maintained within
  - -1/2 times to +2 times the inches of water of the value established during performance test to demonstrate compliance with the emission limit (0.002 grains/dscf)
Ensuring Continuous Compliance *(Continued)*

- Must conduct additional source tests within 60 days, if monitored pressure across the HEPA is outside of the acceptable range (-1/2 to +2) for:
  - a 4-hour time period on 3 or more separate days over 60 consecutive days; or
  - any consecutive 24-hour period
- Additional source tests include:
  - PM source test;
  - Multi-metals source test; and
  - Hexavalent chromium unless all baghouse catch samples are ≤1% total chromium by weight
- Source test required on stack(s) where monitored pressure is outside of acceptable range
Odor Reducing Contingency Measures

- Added provision to require facilities to implement odor reducing measure after 4 confirmed odor complaints within 6 consecutive months
- Objective is to have facility start implementing early action measures to reduce odors
- Confirmed odor complaint:
  - Must be verified by District personnel
  - Odor relating to metal cutting or grinding operations resulting
  - For each occurrence, complaint must be by different individuals from different households
  - An individual may only be counted as one confirmed odor complaint per day
Odor Reducing Contingency Measures *(Continued)*

- Operator must select and implement one of the following odor reducing measures:
  - **Operational changes***
    - Changing ingress and egress openings that may affect the release of odors from a total enclosure
    - Moving grinding stations further from openings within the total enclosure
  - **Process changes***
    - Use of different materials in grinding element
    - Materials applied before, during, or after metal grinding or metal cutting operations

* Not limited to the examples provided below
Odor Reducing Contingency Measures (Continued)

- Enhancements to enclosure*
  - Installation of booths or barriers around grinding stations to contain odors from escaping the total enclosure
  - Upgrade openings used for ingress or egress that will provide even greater control of odors escaping total enclosure; or
- Any other measure or modification to reduce or minimize odors escaping from total enclosure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational or Process Changes</td>
<td>60 Days</td>
</tr>
<tr>
<td>Enhancements to Enclosure</td>
<td>90 Days</td>
</tr>
<tr>
<td>Other Measures</td>
<td>Schedule as approved by the Executive Officer</td>
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</tbody>
</table>

* Not limited to the examples provided below
Odor Reducing Contingency Measures (Continued)

- Notify the Executive Officer within 30 days after implementation of measure being completed
  - Provide description of measure implemented
- The consecutive 6-month period shall be restarted upon full implementation of an odor reducing measure
- Similar to other rules, implementation of odor reducing measures does not preclude the SCAQMD from requiring additional odor reducing measures that may be required through other enforcement mechanisms
Other Revisions
No Substantive Revisions

- No revisions to “Metal Grinding and Cutting Emission Requirements” subdivision (e)
  - Incorporated 0.002 grains/dry standard cubic feet into proposed rule language (Presented Working Group 5)
- No revisions to “Maintenance and Repair Activity Requirements” subdivision (g)
- No revisions to Rule 219 Exemptions, subdivision (n)
Definitions (c)

- Added definition for “Billet” to provide clarity
  - Semi-finished product of square, rectangular, or even round cross section, hot rolled, or forged
  - Width is not more than twice the thickness, and the cross-sectional area is about 36 square inches or more
- Added definition for “Confirmed Odor Complaint”
- Removed definition of “Metal Grinding”
  - No substantive change – not used in rule
  - Specific grinding operations defined such as billet grinding, swing grinding, etc. as well as “metal grinding operation”
Definitions (c) (Continued)

- Modified definitions for “Building” and “Temporary Enclosure” to remove language that refers to “free of breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust”
  - These are intermediate enclosures for most facilities
  - Intended for this language to apply to “Total Enclosures”
- Removed definitions for “Sensitive Receptor” and School”
Definitions (c) (Continued)

- Removed definitions for “Sensitive Receptor” and “School”
  - Incorporated definition directly into the provision
  - Terms reflect previous definitions with the exception of including additional school types
  - Terms only used for provisions for total enclosures with negative air
Definitions (c) (Continued)

- Modified definition of “Metal Forging Facility”
  - Facility that forms and shapes metals through the use of hammering, pressing, or rolling by heating raw stock, usually in the form of ingots, logs or billets, to its plastic deformation temperature and then shaping to a desired shape and size
  - No changes to reference that metal grinding, metal cutting, and small part grinding operations related to this process are included
  - Definition more appropriately reflects “hot forging” operations
Modified definition of “Metal Grinding Operation” to clarify
- Excludes shot peening and abrasive blasting
- Excludes hand grinding that is conducted for the purpose of quality control or quality assurance to remove small imperfections on metal parts after they have been processed in a metal forging facility’s primary metal grinding operation
- Staff observed an operation where small grinding to touch up parts or to “engrave” identification numbers were periodically conducted
- Not intent to require pollution controls to these small operations
Definitions (c) *(Continued)*

- Modified definition of “Metal Removal Fluid” to clarify
  - Metal removal fluid excludes minimum quantity lubrication techniques that coat the tool work piece interface with a thin film of lubricant and minimize heat buildup through friction reduction
  - Minimum quantity lubrication fluids are applied by pre-coating the tool in the lubricant, or by direct application at the tool work piece interface with a fine mist
- Changed reference to “Small Hand Grinding” to “Small Part Grinding”
  - More descriptive – no change to definition
Total Enclosures (d)

- Modified provisions to allow facilities that are currently grinding within a building, that elect to construct a new total enclosure, the same time as other facilities that must construct a total enclosure.

- Facility that is conducting grinding operations in an existing building that is constructing a new building must (Subparagraph (d)(2)(B)):
  - Provide written notice to the Executive Officer within 60 days after rule adoption that a new total enclosure will be constructed.
  - Must complete construction of the total enclosure no later than 12 months after rule adoption.
Total Enclosures (d) *(Continued)*

- No revisions to compliance dates for:
  - Upgrading an existing building to a total enclosure, or
  - Construction of total enclosures for facilities that are currently grinding outside of a building
- Clarification that enhanced housekeeping provisions apply to all facilities prior to completion of total enclosure
Total Enclosures (Continued)

- Incorporated provision that must stop metal grinding and metal cutting operations if inspection of a total enclosure reveals a break, crack, gap or deterioration which results in fugitive metal dust (Discussed at previous Working Group Meeting)
- Cannot resume metal grinding and metal cutting operations until the total enclosure is repaired or temporary measures are implemented that ensure no fugitive metal dust results from the break, crack, gap or point of deterioration
Housekeeping Provisions (f)

- Roof top cleanings are required for total enclosures where metal grinding and metal cutting operations occur.
- Revised roof top provisions to remove reference to
  - “excluding areas associated with the storage of raw, unprocessed metal containing materials, finished metal containing products, storage of metal grinding waste, and non-metal grinding or metal cutting activities”
- Focus on structures where metal particulate is being generated.
Source Tests (h)

- Added provision that allows PM source testing every other year if previous source test is less than 50% of PM emission limit of 0.002 gr/dscf
- Maintained provision for source testing multi-metals every 48 months
- Clarifications that source tests protocols are submitted to the Executive Officer for “approval”
- Discussed new provision for conditional exemption for hexavalent source testing
Monitoring (i)

- Incorporated Bag Leak Detection System (BLDS) from Rule 1155 into proposed rule for all baghouses subject to PR 1430:
  - BLDS requirements under Rule 1155 only apply to baghouses >7,500 square feet
- Static pressure test – added:
  - Duct static pressures shall be established or re-verified during the capture efficiency testing specified in subparagraph (h)(1)(A)
Recordkeeping (j)

- Removed provision to submit monthly records indicating the weight of metal processed by the facility
- Added provisions to maintain records for bulk samples of baghouse catch if analyzing for total chromium for hexavalent chromium source test
- Added details regarding recordkeeping for BLDS monitoring
Signage (k)

- Modified wording for sign to say:
  - “TO REPORT AIR QUALITY ISSUES SUCH AS ODORS, DUST, OR SMOKE FROM THIS FACILITY, CALL EITHER THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG, OR [FACILITY CONTACT PHONE NUMBER]”
- Added wording of air quality issue
- Added wording to reference dust or smoke
- Switched phone numbers, listing SCAQMD before facility contact
Schedule

- Set Hearing – February 3, 2017
- Board Hearing – March 3, 2017

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