



CALIFORNIA METALS COALITION

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CC: SCAQMD Board of Governors
Wayne Nastri, Executive Officer

December 19, 2016

RE: Comments on Proposed Rule 1430: Metal Grinding at Forging Operations

The California Metals Coalition (CMC) appreciates the opportunity to submit written comments regarding the South Coast Air Quality Management District's (SCAQMD) Proposed Rule 1430: *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. CMC has been engaged in the pre-rulemaking process since 2013, as well as the formal rulemaking process initiated with the first working group meeting on October 7, 2015. The comments in this letter are in response to the second draft rule language, which was released **Friday, December 16, 2016**.

First and foremost, CMC has stated at the SCAQMD public working group meetings, and reiterates in this letter, that we support the rulemaking for Proposed Rule 1430.

Secondly, CMC has stated at the October 26, 2016 public workshop in Diamond Bar and December 1, 2016 public workshop in Paramount that process grinding operations conducted outdoors are not an acceptable practice for the metalworking industry.

CMC is a statewide organization with approximately 250 members. The majority of CMC members meet the definition of a small business. CMC holds quarterly roundtables, most recently on December 9th in Paramount, to guide all members on best management practices, housekeeping, and emission control technologies available to the industry. Gathering as an

industry allows us to learn from one another. It is especially helpful for us to meet at larger metalworking facilities in centralized areas. Companies that take the time to attend a 3-hour CMC quarterly roundtable know that we are advocating for them to learn, network, and stay ahead of the compliance curve.

Finally, SCAQMD staff is quickly moving to bring Proposed Rule 1430 in front of the Governing Board at the earliest available date, March 3, 2017. CMC submits its written comments with the expectation that staff will review and address comments without delaying the rulemaking. This is an aggressive timeline and goal, but CMC is committed to being part of the solution.

Comment #1: Clear Communication on Hexavalent Chromium and Metal Grinding

The following comment reflects CMC's verbal comments from the working group meetings on September 14, 2016 and October 26, 2016.

CMC shares the public's concern on the elevated levels of hexavalent chromium detected in the city of Paramount. Metal forging employees work daily in industrialized areas of Southern California, and employee families commonly reside in the area. More importantly, the residents, students and businesses that call Paramount home have a right to clean air.

It is equally important to maintain clear communication on the sources of hexavalent chromium at metalworking facilities, how hexavalent chromium is generated at metalworking facilities, and what air district rules will reduce the dangerous levels.

Based on the nature of metal grinding and expanded air monitoring data disclosed by the SCAQMD, it is our understanding that the dangerous levels of hexavalent chromium in Paramount will not be reduced by focusing on grinding operations at metal forging facilities.

For hexavalent chromium to be generated by metal grinding, one must first understand how hexavalent chromium is created. To begin, the first indicator is the presence of chromium in its elemental form. Chromium can be added to molten ferrous alloys to meet certain metallurgical requirements. A common example is stainless steel, which is generally 80% iron, 15% chromium and 5% nickel.

The presence alone of chromium in the microstructure of the metal does not mean hexavalent chromium has been created. Hexavalent chromium is generated when the metal is heated to a degree very near or at its melting point, which is around 1450 degrees centigrade. To demonstrate the heat threshold to convert chromium into hexavalent chromium, one can look at stainless steel metal cookware. Stainless steel metal cookware is sold and used in millions of

households, but the temperature of cooking does not convert chromium into hexavalent chromium.

The second indicator is whether enough heat is generated during grinding on metals containing chromium to generate hexavalent chromium. Grinding operations are predominantly finishing operations done once the product has solidified. An operator will use a hand grinder or table grinder to finish the smaller metal parts. If the part is larger, a swing grinder will be used.

Since proper grinding is done at temperatures below melting point, it is unlikely that a metal forging facility will convert chromium to hexavalent chromium at the point of grinding. The heated friction between the grinding wheel and metal product can get hot, but is not the temperature levels seen at melting point.

This scientific examination of hexavalent chromium follows SCAQMD's chronological data gathering and discoveries. SCAQMD's November 4, 2016 report titled *Expanded Monitoring of Hexavalent Chromium in Paramount—Assessment of Initial Data*¹ states on page 1 that "additional investigation was needed to determine the source of the hexavalent chromium." The report goes on to chronicle the expansion of air monitoring "to narrow and identify the specific source or sources of hexavalent chromium in the area." It concludes on page 4 by stating "the purpose of the expanded monitoring was to locate the sources of hexavalent chromium."

Staff should address the following science-based comments on hexavalent chromium and grinding:

- A. Chromium must be present in the alloy to potentially generate hexavalent chromium. But proposed Rule 1430's definition of "(13) Metal" lists examples such as "metals include, but are not limited to, iron, steel, and their iron-based alloys, stainless steel, aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, tungsten, and titanium and their non-ferrous alloys". Proposed Rule 1430 must be clear on what alloy(s) can potentially be converted to hexavalent chromium.
- B. Chromium is converted to hexavalent chromium at processes with a certain temperature threshold, more specifically at the melting point of the alloy. Proposed Rule 1430's definitions of "(2) Billet Grinding," "(10) Hand Grinding", "(14) Metal Cutting", "(22) Small Hand Grinding," "(23) Stand Grinding", and "(24) Swing Grinding" will not meet this temperature threshold, but are included in the rule as sources of hexavalent chromium emissions. Scientific justification is expected in Proposed Rule 1430 for how grinding and cutting generates hexavalent chromium.

¹ <http://www.aqmd.gov/docs/default-source/compliance/Carlton-Forge-Works/final-paramount-ass-initial-monitoring-data-110416.pdf?sfvrsn=4>

- C. Proposed Rule 1430 has been promoted as a toxics rule, and is placed in the “1400” category of SCAQMD rules. On October 26, 2016, staff focused much of the working group meeting on hexavalent chromium and discussed the use of CARB test method 425. It would be helpful to all stakeholders to release SCAQMD’s lab reports, not just the results, from the air monitors. The lab reports are arguably more important than the data summaries. This is important communication because Proposed Rule 1430 states it will reduce “toxic” emissions, ex: hexavalent chromium.

- D. SCAQMD requires in Proposed Rule 1430 that point source testing be conducted under “(h) Source Tests”. But CMC is unaware of SCAQMD conducting its own point source tests to support the conclusion that hexavalent chromium is generated at grinding operations. It would be expected that SCAQMD has conducted point source testing on hand grinding, stand grinding, swing grinding, and billet grinding during the multi-year rulemaking process. This is additionally important because fugitive emissions do not occur without source emissions. Bag house dust, glass plates on roof tops, and neighborhood air monitors offer cumulative data results from multiple processes or multiple neighboring sources. SCAQMD should state whether or not it has conducted point source testing at metal forging process grinding operations. And if this data has been collected, the lab data—especially for hexavalent chromium—should be shared with the public.

Comment #2: Hexavalent Chromium Source Testing Requirement at Metal Forging Facilities that Do Not Generate Hexavalent Chromium

The following comment reflects CMC’s verbal comments from the working group meeting on October 26, 2016.

Proposed Rule 1430, section “(h)(1)(B) Source Tests” is required every 48 months for hexavalent chromium and multiple metal emissions. It is unclear why all grinding operations would be pre-determined to generate hexavalent chromium. Based on “Comment #1”, a scientific explanation for the assumed creation of hexavalent chromium at all grinding operations has not been established by the SCAQMD staff. CMC suggests that unless the SCAQMD can determine that hexavalent chromium is reasonably present at all point source grinding operations, this subsection should be amended.

Comment #3: Defining Volume Metrics for a Metal Forging Rule

The following comment reflects CMC’s verbal comments from the working group meetings on September 14, 2016, October 26, 2016, and December 1, 2016.

At the last three public workshops, the SCAQMD staff noted that the 22 metal forging facilities visited demonstrated unique quantities of metal grinding particulate matter being generated. Volume of metal grinding was how staff distinguished a new rule for metal forging facilities.

Examples provided by staff included: the significant amount of particulate matter created during billet grinding, the size or surface area of the metal products being grinded at metal forging shops, and the intensity of grinding being conducted at a metal forging shop. Based on staff's presentation of this information, volume calculations were expected to be included in Proposed Rule 1430 to support these conclusions.

As an example, "(2) Billet Grinding" removes inches of metal from large metal billets that can measure 32 square inches and 10 feet long. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

As a second example, "(24) Swing Grinding" is used on larger metal products. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

As a third example, "(23) Stand Grinding" is for small parts that can be easily handled by an individual worker. Grinding occurs at a standing grinding table and the activity typically includes taking off the rough edges (approximately 1/8 inch) from the part. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

As a fourth example, "(10) Hand Grinding" is for smaller surface areas or polishing. The hand grinder is portable, and conducted on a part much smaller than swing grinders. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

Finally, as a fifth example, "(22) Small Hand Grinding" is similar to hand grinding, but acknowledges the need to define total surface area. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

Overall, Proposed Rule 1430 seeks to regulate several different types of grinders that perform very different functions, and create vastly different volumes of particulate matter. Relying on Proposed Rule 1430's single solution approach for all grinding operations does not match the unique SCAQMD staff field reports conveyed at working group meetings. CMC expects that the SCAQMD will create a volume metric and match the volumes of particulate matter to the various proposed solutions within Proposed Rule 1430.

Comment #4: Sensitive Receptors, Zoning, and SCAQMD Advocating for Public Health

Proposed Rule 1430, section “(d)(8) Total Enclosure with Negative Air” uses a 300-foot sensitive receptor measurement, or 1,000-foot school measurement, to require a total enclosure with negative air. This type of measurement is used by several air agencies in California, including the California Air Resources Board (CARB), to keep new schools, residences, hospitals, or prisons away from facilities with toxic metals, such as hexavalent chromium.

CMC is not suggesting changing this requirement in Proposed Rule 1430, but must express its significant and ongoing frustration with zoning decisions that continue to be made by select cities throughout the South Basin.

Nearly all CMC members have occupied industrial areas of the South Basin long before the construction of parks, schools, residences, hospitals, or businesses with sensitive receptors. CMC has countless situations where metal facilities acquire a new neighbor, and the new neighbor is a sensitive receptor.

As an example, one of our light industrial metal working members recently made a \$10 million equipment investment in his company only to have a swimming school, day care, and restaurant approved by the city and built within 300 feet.

CMC asks the SCAQMD to become a stronger advocate for public health by getting directly involved in city planning decisions. The current approach is not effective, especially if the SCAQMD is relying on advisories. This advocacy will require the use of SCAQMD’s many lobbyists in Sacramento to create the necessary change for our future.

Comment #5: Proposed Rule 1430’s Trigger of City Building Permits, CEQA, etc.

The following comment reflects CMC’s verbal comments from the working group meeting on October 26, 2016.

Many of the structures at metal forging facilities are not immediately conducive to total enclosures, bag houses, secondary filters, and especially negative air. Changes will need to be made to the building to allow the requirements within Proposed Rule 1430 to be met. It is expected that these changes will trigger building permit requirements from the city, CEQA review, fire departments, and even SCAQMD’s own permitting process. Here are some examples:

- “(d) Total Enclosure”
- “(d)(8) Total Enclosures with Negative Air”
- “(e)(1) Metal Grinding Emission Requirements” emission control device

- “(e)(2) & (3)” HEPA filters or an equivalent secondary control device

Under Proposed Rule 1430, each of the bulleted items above has completion requirements of “no later than [6 months after Date of Rule Adoption]” or “no later than [12 months after Date of Rule Adoption].”

This requirement will be a challenge and likely result in a violation of the rule if the SCAQMD does not take into account the time it takes to receive a permit from the city, conduct a CEQA review, pass fire department or other local agency reviews, and complete the SCAQMD permitting process. The 6-month and 12-month deadlines cannot be met without considering the aforementioned permitting and review requirements.

CMC suggests amending Proposed Rule 1430’s language to acknowledge the legal steps required before starting to build a total enclosure, total enclosure with negative air, bag house, emission control device, or HEPA filter.

Comment #6: December 9th Metal Grinding Public Advisory Notice

While Proposed Rule 1430’s language does not include the December 9th Public Advisory Notice on outdoor metal grinding, the content of the notice is directly related to this proposed rule. As a result, CMC has included comments in this letter.

The South Coast Air Quality Management District (SCAQMD) released a public notice dated Friday, December 9th, that advised “all grinding operations” to be conducted indoors. As stated in the opening of this comment letter, CMC agrees with—and has proactively promoted to its members—that process grinding operations should not be conducted outdoors.

But the public advisory does not make any distinction between process grinding operations and repair or maintenance. This is confusing to the industry, and likely confusing to the public, especially when the advisory states “emissions may increase health risks for receptors.”

Repair or maintenance grinding is conducted to keep emission control systems properly operating, to keep containers properly functioning, to fix structures, to avoid accidents, to protect workers, or to simply keep operations running safely. The same grinding equipment (most commonly hand grinders) that is used for process grinding operations may be used for repair or maintenance. The distinction is the duration of the activity, volume of particulate being produced, item being grinded, and purpose of the grinding. The SCAQMD needs to properly advise this in future notices.

Finally, SCAQMD should advise all the operations that conduct metal grinding (See Comment #10) since it is not limited to metalworking facilities.

Comment #7: Avoiding Unintended Consequences of (k) Signage

The following comment reflects CMC's verbal comments from the working group meeting on December 1, 2016.

Proposed Rule 1430 requires all metal forging facilities to install a 16 square foot sign that says "TO REPORT ODORS FROM THIS FACILITY, CALL EITHER [FACILITY CONTACT PHONE NUMBER] OR THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG"

If SCAQMD's intent is to educate the public on the SCAQMD phone number and inspection resources, then direct mailing (especially in impacted industrialized areas) of a SCAQMD brochure is the best way for an individual to receive this information. A second option is to include an informational ad in the local newspaper. A third option is to hold more town hall meetings. But placing a sign on 22 metal forgers—which are a small fraction of the 27,000 permitted facilities that are also potential sources of odors across the four counties of Los Angeles, Orange, San Bernardino and Riverside—it is doubtful how this will achieve the goal of educating the public about the SCAQMD resources.

If SCAQMD's intent is to have the community member be able to quickly contact the metal forging facility, then the verbiage of the sign should be changed. The sign should say "TO CONTACT [NAME OF FACILITY] ABOUT ANY CONCERNS, PLEASE CALL [FACILITY CONTACT PHONE NUMBER]."

If SCAQMD's intent is to pre-determine that all metal forging facilities inherently have nuisance odors, or that odors in a neighborhood should first be directed to a metal forging facility, CMC has to question SCAQMD's goal for singling-out 22 metal forgers in this new rule.

CMC's primary concern isn't in regards to how SCAQMD handles confirmed odor nuisances, but rather how SCAQMD records an unconfirmed complaint. An unconfirmed complaint means that either the odor/air contaminant release could not be detected, or the source/facility cannot be determined.

Although the source of the odor could not be detected, the SCAQMD records the name of a company. This recording system places a negative mark on the business. It is not uncommon for the SCAQMD system to accumulate 10, 50, 100 or even 200 unconfirmed odor complaints. The media, elected officials, lawmakers, or public see this log of unconfirmed complaints and conclude that action must be taken. Unconfirmed odor complaints are damaging to an individual business.

One simple solution is to change how SCAQMD logs unconfirmed odors. Unconfirmed odors should be recorded by the nearest cross-streets. An example would be to record, "an unconfirmed

odor was alleged at the cross streets of Paramount Blvd and Alondra Blvd”. Until the issue of unconfirmed odors is rectified by the SCAQMD, unintended consequences are likely to occur.

Section “(k) Signage” should be amended or omitted based on SCAQMD’s response to the aforementioned concerns.

Comment #8: (j)(1) Recordkeeping

Section (A) requiring “monthly records indicating the weight of metal processed by the facility” should be removed or made confidential. California metal forging companies compete around the world. Publicly disclosing the amount of metal processed by the facility is a competitive disadvantage. In addition, sellers of metal to the metal forging facility can use this information to potentially determine the demand side of an economic transaction. Overall, it is unclear how publicly reporting the weight of the metal processed will further the goals of Proposed Rule 1430.

Section (F) requires a “log of reports...regarding odors or other air quality related issues.” This requirement may also have unintended consequences. When a metal forging facility works with a neighbor to resolve a potential odor or air quality issue, this should be encouraged by the SCAQMD—not reported under a rule requirement. In certain situations, this report log could be misconstrued to make false determinations about compliance or health risks.

Along the lines of Comment #7, the industry is becoming more and more sensitized about how unconfirmed odor complaints are being recorded by the SCAQMD. Section (F) just creates a different layer of scrutiny similar to unconfirmed odor complaints and should be amended or omitted.

Comment #9: Benefits of Good Housekeeping; Compressed Air; Dry Sweeping:

The following comment reflects CMC’s verbal comments from the working group meeting on October 26, 2016.

Proposed Rule 1430, section “(f) Housekeeping Requirements” will be the most effective part of this rule. Particulates from metal grinding and metal cutting are predominantly heavier particles that fall to the ground. If they are not cleaned up, contained, and/or stored, then the potential to track particulate matter out of the facility will increase. The SCAQMD should emphasize housekeeping as one of the key benefits of Proposed Rule 1430.

Subsection “(f)(3)(C) Housekeeping Requirements” states that “compressed air cleaning operations or dry sweeping shall not be conducted within 30 feet of any metal cutting or metal grinding operation.”

Compressed air does not clean. Compressed air is used so that the grinding operator can see if he or she has successfully smoothed the part. CMC suggest that the SCAQMD revisits this subsection and get some more information from the metal forging community on how compressed air is used at grinding stations.

Eliminating specific dry sweeping will work directly against good housekeeping measures at a metal forging facility. Based on the configuration of the grinding space, there could be spatial limitations if dry sweeping is not an option. CMC suggests eliminating the new dry sweeping requirement within 30 feet of any metal cutting or metal grinding operation.

Comment #10: Grinding Regulation Will Set a Precedent for 20,000+ Facilities

SCAQMD has proposed to regulate all metal grinding. Examples of operations that conduct some form of metal grinding across the 10,750 square miles of Los Angeles County, Orange County, San Bernardino County, and Riverside County are:

- Ports
- Ship yards
- Rail yards
- Auto repair shops
- Water utilities
- Electric utilities
- Waste management facilities
- Concrete facilities
- Refineries
- Residential construction
- Office construction
- Road construction
- General construction
- Clean energy projects
- Truck repair stations
- Prisons
- Airports
- Naval yards
- Jewelry making and repair
- Artwork

Proposed Rule 1430 will set a precedent for 20,000+ facilities because:

1. SCAQMD staff states grinding is an unregulated activity that it will now regulate.
2. SCAQMD staff concludes that all grinding is a source of toxic or particulate emissions.

3. SCAQMD staff concludes that all types of grinders larger than 1” are a source of toxic or particulate emissions.
4. SCAQMD staff concludes that all metals (even gold and platinum) are a source of toxic or particulate emissions.
5. SCAQMD staff concludes no distinction for the duration of grinding.
6. SCAQMD staff concludes no distinction for the intensity of grinding.
7. SCAQMD staff concludes no distinction for the volume of grinding particulate created.
8. SCAQMD staff concludes no distinction for the number of grinders used at a facility.

To provide an example of how this proposed rule will set a precedent, hand grinding conducted at a metal forging facility is the same as hand grinding done at a construction site, auto repair shop, port, airport, water utility line installation, etc. Under Proposed Rule 1430, SCAQMD’s precedent is for all grinding, from all sources, based on any duration, intensity, volume, or metal to: (1) All metal grinding operations must be under a total enclosure. (2) All metal grinding must be vented to an emission control system.

The purpose of this comment is to emphasize the need for SCAQMD staff to provide more detailed rule language, and define why Proposed Rule 1430 is specific to metal grinding conducted at metal forging operations.

Comment #11: Conclusion

For the last 48 months, SCAQMD examined metal grinding as a potential source of hexavalent chromium generation. 45 of these 48 months (January 2013 to September 2016) concentrated on 22 metal forging facilities throughout the South Basin, with much focus on a single facility in Paramount.

The last 3 months (October 2016 to December 2016) have been significant for the SCAQMD. Expanded air monitoring efforts uncovered locations and processes prone to generating the dangerous levels of hexavalent chromium in the city of Paramount.

On November 30, 2016, the city of Paramount released a list of 88 metalworking businesses that are known in the industrial area. On December 12, 2016, SCAQMD shared that a multi-agency efforts has visited 170 facilities in the last 6 weeks. CMC expects there will be more businesses to be discovered, especially when the SCAQMD focuses on rogue operations.

Based on the expanded number of businesses currently being uncovered, new data collected by the SCAQMD, recent enforcement activities, and science of metal grinding, CMC concludes that Proposed Rule 1430 will provide the following:

- a) Bringing Process Grinding Operations Indoors.

- b) Permitting of Grinding Equipment.
- c) Possible Reduction of Nuisance Dust and Particulates.
- d) Potential Reduction of Odor Complaints.
- e) Better Housekeeping.

On behalf of the California Metals Coalition, thank you for the opportunity to participate in the rulemaking process for Proposed Rule 1430: *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. If you require any additional information, please do not hesitate to contact us directly.

CMC looks forward to the next working group meeting, receiving feedback on its enclosed comments, and finding quick, science-based solutions for communities in the South Basin.

Sincerely,

A handwritten signature in blue ink, appearing to read 'James Simonelli', with a long horizontal flourish extending to the right.

James Simonelli
Executive Director