

**RULE 1430                      CONTROL OF EMISSIONS FROM METAL GRINDING  
OPERATIONS AT METAL FORGING FACILITIES**

(a) Purpose

The purpose of this rule is to reduce toxic emissions, particulate matter emissions, and odors from metal grinding and metal cutting operations at metal forging facilities.

(b) Applicability

This rule applies to all persons who own or operate a metal forging facility where metal grinding or metal cutting operations are conducted. This rule does not apply to metal grinding or metal cutting conducted under a continuous flood of metal removal fluid, or grinding activities conducted to maintain or repair equipment at the facility.

(c) Definitions

For the purposes of this rule, the following definitions shall apply:

- (1) BAG LEAK DETECTION SYSTEM means a system that monitors electrical charge transfer based on triboelectric or electrostatic induction to continuously monitor bag leakage and similar failures by detecting changes in particle mass loading in the exhaust.
- (2) BILLET means a semi-finished hot rolled, or forged product. The width of a billet is not more than twice the thickness, and the cross-sectional area is about 36 square inches or above.
- (3) BILLET GRINDING means metal grinding using (a) travelling grinder(s) designed for billets, which are metal bars, before and after forging.
- (4) BUILDING means a type of enclosure that is a permanent structure, completely enclosed with a floor, four walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-off), with openings to allow ingress and egress for people and vehicles.
- (5) CAPTURE VELOCITY means the minimum hood induced air velocity necessary to capture and convey air contaminants into an emission collection system.
- (6) CONFIRMED ODOR COMPLAINT means an occurrence of odor relating to metal grinding or metal cutting operations resulting in a complaint by different individuals from different households, with the source of the odor having been verified by District personnel. An individual may only be counted as one confirmed odor complaint per day.

- (7) DUCT SECTION means a length of duct including angles and bends which is contiguous between two or more process devices (e.g., between a furnace and heat exchanger; baghouse and scrubber; scrubber and stack; etc.).
- (8) EFFECTIVE ZONE means the region in front of the hood that is adequately controlled by the flow of air into the hood.
- (9) EMISSION COLLECTION SYSTEM means any equipment installed for the purpose of directing, taking in, confining, and conveying an air contaminant, and which at minimum conforms to design and operation specifications given in the most current edition of *Industrial Ventilation, Guidelines and Recommended Practices*, published by the American Conference of Governmental Industrial Hygienists, at the time the permit application is deemed complete with the SCAQMD.
- (10) EMISSION CONTROL DEVICE means any equipment after the emission collection system for the purposes of collecting and reducing metal-dust emissions from metal grinding and metal cutting operations.
- (11) FUGITIVE METAL DUST means any solid particulate matter containing metal that has the potential to become airborne.
- (12) HAND GRINDING means metal grinding using a hand tool, including hand powered tools, that prepares, cuts, grinds and polishes or finishes forgings with a disc greater than 1-inch diameter. Examples include angle grinders, internal diameter "I.D." grinders, disc grinders, and side grinders. Hand grinding excludes small part grinding as defined in paragraph (c)(20).
- (13) HIGH EFFICIENCY PARTICULATE ARRESTORS (HEPA) means filter(s) rated at 99.97% or more efficient in collecting particle sizes 0.3 microns or greater in size.
- (14) MAINTENANCE AND REPAIR ACTIVITY means any of the following activities conducted outside of a total enclosure that generates or has the potential to generate fugitive metal-dust:
  - (A) maintenance or repair activities on any emission control device that vents metal grinding or metal cutting operations; or
  - (B) replacement or removal of any duct section used to vent metal grinding or metal cutting operations.
- (15) METAL means ferrous (iron-based) metals and alloys and non-ferrous (non-iron-based) metals and alloys. Examples of metals include, but are not limited to, iron, stainless 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.

- (16) METAL CUTTING OPERATION means a process used to abrasively cut starting ingot, log, or billet stock to length in preparation for the forging process. This does not include plasma cutting or laser cutting.
- (17) METAL FORGING FACILITY means any 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. Metal grinding, metal cutting, and small part grinding operations related to this process are included.
- (18) METAL GRINDING OPERATION means billet grinding, hand grinding, stand grinding, swing grinding, and torch cutting. Metal grinding operation does not include small part grinding as defined in paragraph (c)(20), shot peening, and abrasive blasting. Metal grinding operation also 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.
- (19) METAL REMOVAL FLUID means a fluid 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, and to flush away metal chips and debris, but does not include minimum quantity lubrication fluids used to 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.
- (20) SMALL PART GRINDING means metal grinding using a hand tool, including hand powered tools with a disc greater than 1-inch diameter that is used to prepare, cut, grind and polish or finish forging parts with a total surface area less than 25 square inches. Examples include angle grinders, internal diameter "I.D." grinders, disc grinders, and side grinders.
- (21) STAND GRINDING means metal grinding using a stand grinder that is usually single speed and used for small castings and light metal removal.
- (22) SWING GRINDING means metal grinding using a swing grinder designed with full lateral movement typically used to prepare medium and large billets.

- (23) TEMPORARY ENCLOSURE means a structure comprised of a floor, roof, walls and or partitions on at least three sides or three-quarters of the perimeter that surrounds areas where metal grinding or metal cutting operations are conducted.
  - (24) TORCH CUTTING means metal grinding using a blowpipe by which metal is preheated with a flame and then oxidized rapidly and removed by a jet of oxygen issuing centrally through the preheating flame.
  - (25) TOTAL ENCLOSURE means a permanent containment structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-off), with limited openings to allow access and egress for people and vehicles, that is free of breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust.
- (d) Total Enclosures
- (1) An owner or operator of a metal forging facility is prohibited from conducting all metal grinding or metal cutting operations, or small part grinding outside of a temporary enclosure, building, or total enclosure.
  - (2) An owner or operator of a metal forging facility shall conduct all metal grinding and metal cutting operations in a total enclosure that minimizes the release of fugitive metal dust emissions from passages, doorways, and bay doors by installing automatic roll-up doors, plastic strip curtains, or vestibules for doors and openings of the total enclosure. Alternative methods to minimize the release of fugitive metal dust from the total enclosure may be used if the owner or operator can demonstrate to the Executive Officer (an) equivalent or more effective method(s) to minimize cross-draft conditions. The total enclosure shall be completed:
    - (A) No later than September 3, 2017, if the owner or operator is conducting metal grinding or metal cutting operations in a building, existing as of March 3, 2017, that will be modified to a total enclosure to meet the provisions in paragraph (d)(2); or
    - (B) No later than 12 months after March 3, 2017, if a new building is constructed to meet the provisions of paragraph (d)(2), provided the owner or operator provides written notice to the Executive Officer within 60 days after March 3, 2017 that a new total enclosure will be constructed.
  - (3) Until the total enclosure requirements of paragraph (d)(2) are met, the owner or operator of a metal forging facility shall:
    - (A) Conduct metal grinding and metal cutting operations in a temporary enclosure or a building.

- (B) In addition to housekeeping provisions specified under subdivision (f), conduct the following cleanings by wet cleaning or HEPA vacuum after or at the end of each operating shift:
  - (i) Floors within 30 feet of a work station or workstations for metal grinding or metal cutting;
  - (ii) Floors within 40 feet of any entrance/exit point for the temporary enclosure or building; and
  - (iii) Floors of temporary enclosure or building areas where metal grinding or metal cutting operations occur.
- (4) All enclosure types shall be designed in a manner that does not conflict with requirements set forth by the federal Occupational Safety and Health Administration (OSHA) or the California Division of Occupational Safety and Health (CAL-OSHA) regarding worker safety.
- (5) The owner or operator of a metal forging facility shall inspect any total enclosure at least once a calendar month for breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust.
- (6) The owner or operator of a metal forging facility shall immediately stop metal grinding and metal cutting operations if inspection of a total enclosure where these operations are conducted reveals a break, crack, gap or deterioration which results in fugitive metal dust. The owner or operator may resume metal grinding and metal cutting operations until the total enclosure is repaired pursuant to paragraph (d)(7), if temporary measures are implemented that ensure no fugitive metal dust results from the break, crack, gap or point of deterioration.
- (7) The owner or operator of a metal forging facility shall repair any breaks, cracks, gaps, or deterioration that could or results in fugitive metal dust from any total enclosure within 72 hours of discovery. The Executive Officer may approve a request for an extension beyond the 72-hour limit if the request is submitted before the 72-hour time limit has expired, and the owner or operator can provide information to substantiate that either:
  - (A) the repair will take longer than 72 hours; or
  - (B) the equipment, parts or materials needed for the repair cannot be obtained within 72 hours.
- (8) Total Enclosures with Negative Air
  - (A) The owner or operator shall vent the total enclosure for any metal grinding or metal cutting operation to an emission control device that meets the requirements of subdivision (e) no later than 6 months after a Permit to

Construct for the emission control device is issued by the Executive Officer if the property line of the facility is:

- (i) Within 500 feet of the property line of any residence including private homes, condominiums, apartments, and living quarters; daycare centers; health care facilities such as hospitals or retirement and nursing homes; long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing; or
  - (ii) Within 1,000 feet of the property line of any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including kindergarten and grades 1 through 12, inclusive; and Early Learning and Developmental Programs as defined by the U.S. Department of Education. This provision does not apply to any private school in which education is primarily conducted in private homes.
- (B) The total enclosure referenced in subparagraph (d)(8)(A) shall continuously meet an in-draft velocity of > 200 feet per minute at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups no later than 6 months after a Permit to Construct for the emission control device venting the total enclosure is issued by the Executive Officer. In-draft velocities for each total enclosure shall be determined by placing an anemometer, or an equivalent device approved by the Executive Officer, at the center of the plane of any opening of the total enclosure.
- (e) Metal Grinding and Cutting Emission Requirements
- (1) The owner or operator of a metal forging facility shall vent emissions from all metal grinding and metal cutting operations to an emission control device no later than 6 months after a Permit to Construct for the emission control device is issued by the Executive Officer. The emission control device shall not exceed a PM outlet concentration of 0.002 grains of particulate matter per dry standard cubic foot as determined by the most recent SCAQMD-approved source test conducted on behalf of the facility or the SCAQMD pursuant to subdivision (h).
  - (2) The final stage of any emission control device required under paragraph (e)(1) shall be fitted with HEPA filters, or filter media rated by the manufacturer to achieve a minimum of 99.97% control efficiency for 0.3 micron particles, and designed in a manner that does not conflict with requirements or guidelines set forth by the

OSHA or CAL-OSHA regarding worker safety, or the National Fire Protection Association regarding safety.

- (3) The owner or operator of a metal forging facility may alternatively fit the final stage of any emission control device required under paragraph (e)(1) with filter media rated by the manufacturer to achieve a minimum of 98% control efficiency for 0.3 micron particles if:
    - (A) the owner or operator does not conduct billet grinding, metal cutting, swing grinding, or torch cutting; and
    - (B) the owner or operator operates a combination of 10 or fewer hand grinding units or stand grinding stations; and
    - (C) toxic emissions from the emission control device does not exceed the screening levels identified in Table I – Toxic Air Contaminants in Rule 1401 - New Source Review of Toxic Air Contaminants, or does not result in a risk of over 1 in a million using the most recent SCAQMD Risk Assessment Procedures for Rule 1401.
  - (4) The owner or operator of a metal forging facility shall operate the emission control device required under paragraph (e)(1) at the minimum hood induced capture velocity specified in the most current edition of the *Industrial Ventilation, A Manual of Recommended Practice for Design*, published by the American Conference of Governmental Industrial Hygienists, at the time a permit application is deemed complete with the SCAQMD.
  - (5) No later than April 2, 2017, the owner or operator of a metal forging facility shall:
    - (A) Provide permanent visual indicators or markings at all hand grinding, stand grinding, swing grinding, and torch cutting stations that identify the maximum distance metal grinding may occur from the emission control device to ensure the emission collection system meets the requirements of subdivision (e);
    - (B) All metal grinding activity shall be in front of the hood face and within the area identified in subparagraph (e)(5)(A); and
    - (C) The air flow shall not be obstructed between the metal grinding operation and the hood for the emission collection system.
  - (6) No later than April 2, 2017, the owner or operator of a metal forging facility shall remove any weather cap installed on any stack that is a source of metal particulate emissions or install a butterfly valve.
- (f) Housekeeping Requirements

Unless otherwise specified, no later than April 2, 2017, the owner or operator of a metal forging facility shall implement the following housekeeping practices:

- (1) The owner or operator of a metal forging facility that is conducting metal grinding or metal cutting operations shall conduct semi-annual wet cleaning or HEPA vacuuming, no more than 6 calendar months apart, of roof tops for total enclosures that house areas associated with metal grinding or metal cutting operations.
  - (2) The owner or operator of a metal forging facility that is conducting metal grinding or metal cutting operations or small part grinding, shall conduct daily wet cleaning or HEPA vacuuming of the following:
    - (A) areas where metal containing wastes generated from metal grinding or metal cutting operations are stored, disposed of, recovered or recycled;
    - (B) floors within 20 feet of a work station or workstations for metal grinding or metal cutting operations;
    - (C) floors within 20 feet of any entrance/exit point for a temporary enclosure, building or total enclosure; and
    - (D) floors within 10 feet of an emission control device dedicated to metal grinding or metal cutting operations.
  - (3) The owner or operator of a metal forging facility that is conducting metal grinding or metal cutting operations or small part grinding, shall additionally conduct the following housekeeping measures:
    - (A) Monthly wet cleaning or HEPA vacuuming of floors of a temporary enclosure, building or total enclosure areas where metal grinding or metal cutting operations occur.
    - (B) Storing all materials capable of generating any amount of fugitive metal dust including, but not limited to, metal containing waste generated from the housekeeping requirements of this subdivision and the maintenance and repair activities of subdivision (g), in sealed containers, unless located within a total enclosure;
    - (C) Prohibiting compressed air cleaning operations or dry sweeping within 30 feet of any metal cutting or metal grinding operation, unless the compressed air cleaning operation or dry sweeping is conducted under an emission control device pursuant to subdivision (e).
- (g) Maintenance and Repair Activity Requirements

On and after April 2, 2017, the owner or operator of a metal forging facility shall implement the following measures when conducting maintenance and repair activities as defined in paragraph (c)(14):

- (1) No later than one hour after completion of maintenance or repair activity, the owner or operator of a metal forging facility shall wet clean or HEPA vacuum the floors within 20 feet of where the maintenance or repair activity was conducted.
- (2) Maintenance and repair activity shall be stopped immediately when instantaneous wind speeds are  $\geq 20$  mph, unless the activity is being conducted within a building or temporary enclosure. Maintenance or repair activity may be continued if it is necessary to prevent the release of metal particulate emissions.
- (3) Wet clean or HEPA vacuum all metal-contaminated equipment and materials used for maintenance and repair activity immediately after completion of work in a manner that does not generate fugitive metal dust.

(h) Source Tests

- (1) Beginning March 3, 2017, the owner or operator of a metal forging facility shall conduct the following source tests for any emission control device subject to subdivision (e):
  - (A) a source test for PM emissions once every 12 months to demonstrate compliance with the emission standard specified in subdivision (e), including confirmation of the capture velocity referenced in paragraph (e)(4). If the most recent source test demonstrates 50% or less of the PM emissions standard required under subdivision (e), in which case the next test for PM emissions from that emission control device may be performed no later than 24 months after the date of the most recent test;
  - (B) a source test for multiple metal emissions once every 48 months; and
  - (C) a source test for hexavalent chromium emissions once every 48 months. The owner or operator of a metal forging facility shall be exempt from the requirement to source test for hexavalent chromium if a metals analysis by X-ray fluorescence of bulk samples from the baghouse catch demonstrates a total chromium concentration of no greater than 1% by weight. The metals analysis by X-ray fluorescence shall be conducted upon each removal or disposal of the baghouse catch. If a metals analysis by X-ray fluorescence demonstrates a total chromium concentration of greater than 1% by weight, the owner or operator shall conduct a hexavalent chromium emissions source test for the associated baghouse within 60 days of the

analysis, with subsequent tests conducted once every 48 months from the date of the most recent hexavalent chromium emissions test.

- (2) The owner or operator of a metal forging facility with an existing, SCAQMD-permitted metal grinding or metal cutting emission control device in operation before March 3, 2017, shall submit a source test protocol for the initial source test to demonstrate compliance with paragraph (h)(1) to the Executive Officer for approval no later than May 2, 2017. Subsequent source test protocols for source tests conducted after the initial source test shall be submitted to the Executive Officer for approval no later than 90 days prior to the compliance deadline to conduct the next source test to demonstrate compliance with (h)(1). The initial source test protocol may be used for subsequent source tests if there are no changes.
- (3) The owner or operator of a metal forging facility with a new or modified metal grinding or metal cutting emission control device with initial start-up on or after March 3, 2017, shall submit a source test protocol for the initial source to demonstrate compliance with paragraph (h)(1) to the Executive Officer for approval no later than 30 days after initial start-up. Subsequent source test protocols for source tests conducted after the initial source test shall be submitted to the Executive Officer for approval no later than 90 days prior to the compliance deadline to conduct the next source test to demonstrate compliance with (h)(1). The initial source test protocol may be used for subsequent source tests if there are no changes.
- (4) Source test protocols required under subdivision (h) shall include the source test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:
  - (A) Target particulate mass emission standard;
  - (B) Preliminary target pollutant analytical data;
  - (C) Planned sampling parameters; and
  - (D) Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.
- (5) The owner or operator of a metal forging facility shall conduct the source tests specified in paragraph (h)(1) no later than 60 days from approval of the source test protocol, unless otherwise approved in writing by the Executive Officer.
- (6) If the monitored pressure across the HEPA filter is not maintained pursuant to paragraph (i)(4), the following source tests for the emission control device that triggered the monitored pressure change shall be performed no later than 60 days

after the continuous data acquisition system indicated the pressure across the HEPA filter was not maintained:

- (A) a source test for PM emissions;
  - (B) a source test for multiple metals; and
  - (C) a source test for hexavalent chromium unless the facility conducts metal analyses pursuant to subparagraph (h)(1)(C) that demonstrate all bulk samples from the baghouse catch are no greater than a concentration of 1% by weight for total chromium.
- (7) The owner or operator shall notify the Executive Officer in writing 10 calendar days prior to conducting any source test required by this subdivision.
- (8) The owner or operator shall notify the Executive Officer within three business days (Monday through Friday) of when the facility knew or should have known of any source test result that exceeds the emission standard specified in subdivision (e). Notifications shall be made to 1-800-CUT-SMOG and followed up in writing to the Executive Officer with the results of the source tests within seven business days of notification.
- (9) Source tests shall be conducted representative of typical operating conditions and in accordance with any of the following applicable test methods:
- (A) SCAQMD Method 5.1 – *Determination of Particulate Matter Emissions from Stationary Sources Using a Wet Impingement Train*
  - (B) SCAQMD Method 5.2 – *Determination of Particulate Matter Emissions from Stationary Sources Using Heated Probe and Filter*
  - (C) SCAQMD Method 5.3 – *Determination of Particulate Matter Emissions from Stationary Sources Using an In-Stack Filter*
  - (D) CARB Test Method 425 – *Determination of Total Chromium and Hexavalent Chromium Emissions from Stationary Sources*
  - (E) CARB Method 436 – *Determination of Multiple Metal Emissions from Stationary Sources*
  - (F) U.S. EPA Method 306 – *Determination of Chromium Emissions from Decorative and Hard Chromium Electroplating and Chromium Anodizing Operations – Isokinetic Method*
- (10) The owner or operator may use alternative or equivalent source test methods as defined in 40 CFR 60.2, if approved in writing by the Executive Officer, in addition to the Air Resources Board, or the U.S. EPA, as applicable.
- (11) The operator shall use a test laboratory approved under the SCAQMD Laboratory Approval Program for the source test methods cited in this subdivision. If there is

no approved laboratory, then approval of the testing procedures used by the laboratory may be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.

- (12) When more than one source test method or set of source test methods are specified for any testing, the application of these source test methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation established by any one of the specified source test methods or set of source test methods shall constitute a violation of the rule.
  - (13) Testing conducted by the facility, by the SCAQMD, or by a contractor acting on behalf of the SCAQMD or the facility to determine compliance with this rule shall be performed according to the most recent SCAQMD-approved test protocol for the same purpose or compounds.
  - (14) Reports from source testing conducted pursuant to subdivision (h) shall be submitted to the SCAQMD in 60 days or less after completion of testing.
  - (15) The Executive Officer may approve a request for an extension of the compliance deadline date specified in paragraph (h)(1) if the facility can demonstrate that it timely filed a complete source test protocol and associated information, and is unable to meet the deadline due to reasons beyond the facility's control. The request shall be submitted to the Executive Officer no later than 30 days before the compliance deadline date.
- (i) Monitoring
- (1) Bag Leak Detection System  
The owner and operator of a metal forging facility shall apply for a permit to install, operate, calibrate and maintain a Bag Leak Detection System pursuant to SCAQMD Rule 1155.
  - (2) The corresponding duct static pressure for the minimum hood induced capture velocity specified in paragraph (e)(4) shall be accurately measured once per operating day using the measurement procedures specified in the most current edition of the *Industrial Ventilation, A Manual of Recommended Practice for Operation and Maintenance*, published by the American Conference of Governmental Industrial Hygienists, at the time a permit application is deemed complete with the SCAQMD, or any more stringent methods required by OSHA or CAL-OSHA. Duct static pressures shall be established or re-verified during the capture efficiency testing specified in subparagraph (h)(1)(A).

- (3) The owner or operator of a metal forging facility shall continuously monitor the pressure drop across the HEPA filter of an emission control device for metal grinding or metal cutting operations with a mechanical gauge. The gauge shall be located so that it is easily visible and in clear sight of the operator or maintenance personnel. For the purposes of this requirement, the owner or operator shall ensure that the monitoring device:
    - (A) Is equipped with ports to allow for periodic calibration in accordance with manufacturer's specifications;
    - (B) Is calibrated according to manufacturer's specifications at least once every calendar year;
    - (C) Is equipped with a continuous data acquisition system (DAS). The DAS shall record the data output from the monitoring device at a frequency of not less than once every sixty (60) minutes;
    - (D) Generates a data file from the computer system interfaced with each DAS each calendar day saved in Microsoft Excel (xls orxlsx) format or other format as approved by the Executive Officer. The file shall contain a table of chronological date and time and the corresponding data output value from the monitoring device in inches of water column. The operator shall prepare a separate data file each day showing the 4-hour average pressure readings recorded by this device each calendar day; and
    - (E) Is maintained in accordance with manufacturer's specifications.
  - (4) If the pressure across the HEPA filter is not maintained within the range specified in the Permit to Operate for the emission control device as determined by hourly or more frequent recordings by the DAS for the averaging periods below, the owner or operator shall conduct a source test pursuant to paragraph (h)(6).
    - (A) A 4-hour time period on 3 or more separate days over 60 continuous days; or
    - (B) Any consecutive 24-hour period.
  - (5) For each emission collection system subject to this subdivision, confirmation of the capture velocity referenced in paragraph (e)(4) and a periodic smoke test shall be conducted at least once every 3 months using the procedure set forth in Appendix 1 of this rule. The smoke test need not be performed if it is demonstrated to the Executive Officer that it presents an unreasonable risk to safety.
- (j) Recordkeeping

- (1) The owner or operator of a metal forging facility shall keep records of the following, as applicable:
  - (A) Monthly records of weight of metal waste collected by the baghouse catch, including, if applicable, any metal analyses for bulk samples of baghouse catches conducted pursuant to subparagraph (h)(1)(C);
  - (B) Monthly records of weight of metal waste collected by housekeeping activities required by subdivision (f);
  - (C) Records of dates when bags for baghouses, cartridges, or HEPA filters are replaced;
  - (D) Records of total enclosure inspections required by paragraph (d)(5), periodic smoke tests required by paragraph (i)(4), emission control device inspection and maintenance required by paragraph (e)(5), housekeeping activities required by subdivision (f), maintenance and repair activities required by subdivision (g), including the name of the person performing the activity, and the dates and times at which specific activities were completed; and
  - (E) Log of reports to the facility regarding odors or other air quality related issues that includes the date, time, name and contact information for the person reporting the issue, source of the issue, how the issue was resolved, and how the issue will be avoided in the future.
- (2) For the purposes of paragraph (i)(1), records kept shall include:
  - (A) Facility name;
  - (B) Facility representative for maintaining the Baghouse Leak Detection System;
  - (C) Date and time of routine maintenance and inspections conducted on Bag Leak Detection System;
  - (D) The date and time of any alarm, including length of the alarm time, and cause of the alarm;
  - (E) Whether visible emissions occurred;
  - (F) Total operating hours of the baghouse; and
  - (G) Any additional information as specified by the Executive Officer.
- (3) The owner or operator shall maintain all records required in this subdivision for at least five years and shall be made available to the SCAQMD personnel upon request with at least the two most recent years kept onsite.

(k) Signage

- (1) The owner or operator of a metal forging facility shall install a sign no later than April 2, 2017 that says, “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*]” and meets the following requirements, unless otherwise approved in writing by the Executive Officer:
  - (A) Installed within 50 feet of the main entrance of the facility that is visible to the public, and in a location on each side of the facility that is visible to the public;
  - (B) Measures at least 16 square feet; and
  - (C) Displays lettering at least 3 inches tall with text contrasting with the sign background.
  
- (l) **Permit Application Submittals for Existing Metal Grinding or Cutting Operations**  
For metal grinding or metal cutting operations existing prior to March 3, 2017, the owner or operator shall submit complete permit applications no later than May 2, 2017 for all construction and/or necessary equipment required under paragraphs (d)(8) – Total Enclosures with Negative Air, (e)(1) – Emission Control Devices, and (i)(1) – Bag Leak Detection Systems.
  
- (m) **Odor Contingency Measures**
  - (1) The owner or operator of a metal forging facility that has been notified by the Executive Officer of four (4) confirmed odor complaints in any consecutive (6) months, shall implement one of the following odor reducing measures specified in subparagraphs (m)(1)(A) through (m)(1)(D):
    - (A) Operational changes to reduce odors including, but not limited to, 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;
    - (B) Process changes to reduce odors including, but not limited to, use of different materials in the grinding element, and materials applied before, during, or after metal grinding or metal cutting operations;
    - (C) Enhancements to the temporary enclosure, building, or total enclosure to reduce odors escaping the total enclosure including, but not limited to, installation of booths or barriers around grinding stations to contain odors from escaping the total enclosure, upgrade openings used for ingress or

- gress that will provide even greater control of odors escaping total enclosure; or
- (D) Any other measure or modification, approved by the Executive Officer, that can help to reduce or minimize odors emanating from the metal grinding or metal cutting operation shall be implemented on a schedule approved by the Executive Officer.
- (2) The owner or operator of a metal forging facility that has been notified to implement an odor reducing measure pursuant to paragraph (m)(1) shall complete implementation of the measure within:
    - (A) 60 days after notification by the Executive Officer in paragraph (m)(1) for a measure selected under subparagraphs (m)(1)(A) or (m)(1)(B);
    - (B) 90 days after notification by the Executive Officer in paragraph (m)(1) for a measure selected under subparagraph (m)(1)(C);
    - (C) 6 months after a Permit to Construct for the emission control device is issued by the Executive Officer for the installation or modification of equipment necessary to implement a measure selected under subparagraphs (m)(1)(A) through (m)(1)(C); and
    - (D) a schedule as approved by the Executive Officer for a measure selected under subparagraph (m)(1)(D).
  - (3) Within 30 days after completing the implementation of a measure required under paragraph (m)(1), the owner or operator of a metal forging facility shall provide a description of the measure that was implemented and notify the Executive Officer that implementation of the measure has been completed.
  - (4) The consecutive 6-month period referenced in paragraph (m)(1) shall be restarted upon full implementation of an odor reducing measure specified in subparagraphs (m)(1)(A) through (m)(1)(D).
- (n) **Rule 219 Exemption**  
Beginning March 3, 2017, any equipment subject to this rule and any associated emission control devices shall no longer be exempt from the requirement of a written permit pursuant to SCAQMD Rule 219.

**Appendix 1 - Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of (an) Emission Control Device(s) Pursuant to Paragraph (i)(4).**

1. Applicability and Principle
  - 1.1 Applicability. This method is applicable to all point sources where an emission control device is used to capture and control emissions from metal grinding or metal cutting operations.
  - 1.2 Principle. Collection of emissions from metal grinding or metal cutting sources is achieved by the ventilation system associated with the emission control device for metal grinding or metal cutting equipment. Emission control efficiency at the exhaust of an emission control device is related to capture efficiency at the inlet of the ventilation system. For this reason, it is imperative that 100% capture efficiency is maintained. A smoke device placed within the area where collection of emissions by the ventilation system occurs reveals this capture efficiency.
2. Apparatus
  - 2.1 Smoke Generator. The smoke generator shall be adequate to produce a persistent stream of visible smoke (e.g., Model S102 Regin Smoke Emitter Cartridges). The smoke generating device should not provide excessive momentum to the smoke stream that may create a bias in the determination of collection efficiency. If the device provides slight momentum to the smoke stream, it shall be released perpendicular to the direction of the collection velocity.
3. Testing Conditions
  - 3.1 Equipment Operation. Any equipment to be smoke tested that is capable of generating heat as part of normal operation must be smoke tested under those normal operating conditions. Operating parameters of the equipment during the smoke test shall be recorded. The smoke test shall be conducted while the emission control device is in normal operation. The position of any adjustable dampers that can affect air flow shall be documented. Precautions should be taken by the facility to evaluate any potential physical hazards to ensure the smoke test is conducted in a safe manner.
  - 3.2 Cross Draft. The smoke test shall be conducted while the emission control device is in normal operation and under typical draft conditions representative of the facility's metal grinding or metal cutting operations. This includes cooling fans and openings affecting draft conditions around the metal grinding area including, but not limited to, vents, windows, doorways, bay doors, and roll-ups, as well as the operation of

other work stations and traffic. The smoke generator must be at full generation during the entire test and operated according to manufacturer's suggested use.

4. Procedure
  - 4.1 Collection Slots. For work stations equipped with collection slots or hoods, the smoke shall be released at points where metal grinding or metal cutting emissions are generated (e.g. the point where welding or stacking of grids occurs). Observe the collection of the smoke to the collection location(s) of the ventilation system. An acceptable smoke test shall demonstrate a direct stream to the collection location(s) of the ventilation system without meanderings out of this direct path. Smoke shall be released at points not to exceed 12 inches apart across ventilated work areas. Record these observations at each of the points providing a qualitative assessment of the collection of smoke to the ventilation system.
  - 4.2 Equipment Enclosures. Equipment enclosures include equipment where emissions are generated inside the equipment, and the equipment is intended to have inward air flow through openings to prevent the escape of process emissions. The smoke shall be released at points outside of the plane of the opening of the equipment, over an evenly spaced matrix across all openings with points not to exceed 12 inches apart. Observe the inward movement of the smoke to the collection location(s) of the ventilation system. An acceptable smoke test shall demonstrate a direct stream into the equipment without meanderings out of this direct path. Record these observations at each of the points providing a qualitative assessment of the collection of smoke to the ventilation system.
5. Documentation. The smoke test shall be documented by photographs or video at each point that clearly show the path of the smoke. Documentation shall also include a list of equipment tested and any repairs that were performed in order to pass the smoke test. As previously discussed, the documentation shall include the position of adjustable dampers, cross draft conditions, and the heat input of the equipment, if applicable. The documentation shall be signed and dated by the person performing the test. The records shall be maintained on site for at least two years and be made available to SCAQMD personnel upon request.