



Rule 1155 – PM Control Devices Summary and FAQs

- This rule establishes requirements for permitted particulate matter (PM) air pollution control devices, such as baghouses, high efficiency particulate air (HEPA) systems, bin vents, or other dust collectors using high efficiency or other air filters, cyclones, electrostatic precipitators, and wet scrubbers. This rule applies to the operator of these permitted control devices venting processes that have direct, non-combustion PM emissions.
- Baghouses are divided into three tiers based on a filter surface area, such as Tier 1 baghouse with a filter area less than or equal to 500 ft², Tier 2 baghouse with a filter area greater than 500 ft² and less than or equal to 7,500 ft², and Tier 3 baghouse with a filter area greater than 7,500 ft².
- The rule requires no visible emissions (excluding condensed water vapor) from the equipment at any time beginning April 1, 2010. This is applicable to all PM air pollution control devices, inclusive of Tiers 1 through 3. For this provision, the operator must have at least one person trained in the reading of visible emissions pursuant to EPA Method 22, no later than March 31, 2010.
 - ◆ Beginning April 1, 2010, a once a week, consecutive five-minute visible emissions observation using EPA Method 22 and associated recordkeeping must be conducted for any baghouse with a filter area greater than 100 ft² or other PM control devices.
 - ◆ Any baghouse outfitted completely with EPA's verified filtration products are only required to conduct visible emission observations once a month, and maintain records for each Method 22 observation and any subsequent actions taken to eliminate visible emissions.
- The rule requires all Tier 3 baghouses to meet 0.01 gr/dscf for total outlet PM concentration (both solid and condensable) by January 1, 2011.
 - ◆ For hot mix asphalt production industry, compliance is required by January 1, 2013 with an additional one-year extension granted if bags were replaced within one year prior to December 4, 2009.
 - ◆ All Tier 3 baghouses located at a Title V facility are required to conduct source tests by January 1, 2011 and every five years thereafter using SCAQMD Methods 5.1, 5.2, or 5.3, as applicable, to demonstrate compliance with this limit.
 - ◆ If the operator discovers the PM limit was exceeded, the problem that led to the exceedance must be resolved within 24 hours of discovery.
- Existing Tier 3 baghouses must file a permit application for a bag leak detection system (BLDS) by May 1, 2010 and install a BLDS within three months of the issuance of permit.
 - ◆ The facility is required to conduct a once a week, five-minute visible emissions observation and recordkeeping beginning April 1, 2010 and up to and until the BDLS is installed.
 - ◆ The operator of hot mix asphalt production equipment may conduct daily visible emissions monitoring and recordkeeping, in lieu of BLDS installation, beginning January 1, 2011, provided the facility operator notifies the Executive Officer in writing no later than May 1, 2010, files a permit application for a BLDS no later than June 1, 2011, and installs the BLDS within three months of the permit issuance.
- Operators of new Tier 3 baghouses are required to install and operate a BLDS after December 4, 2009.

- Beginning April 1, 2010, any PM control device required to have a permit must be operated and maintained in accordance with the manufacturer's operation and maintenance (O&M) manual or other similar written materials supplied by the manufacturer or distributor of the control device, to ensure proper operating condition of the control device. If such documents are not available, the operator will have to provide and follow written O&M procedures for the PM control device(s).
- An existing manual shaker-type baghouse must be upgraded or replaced with, at a minimum, an automated shaker unit, no later than January 1, 2012 or after the end of the useful life, whichever comes sooner. A manual shaker-type baghouse must not be installed after December 4, 2009.
- When a new process is vented to a new baghouse, the operator shall install and maintain a ventilation system that meets a minimum capture velocity requirement.
- Materials collected in a permitted PM control device shall be discharged for disposal or back to the process through a controlled material transfer system to prevent fugitive emissions during discharge.
- The rule also includes limited exemptions for:
 - ◆ Equipment that is not in operation as of December 4, 2009 until equipment resumes operation.
 - ◆ Facility operations subject to District Rules 1105.1 (fluid catalytic cracking units) and 1156 (cement manufacturing facilities), paint/powder spray booths, and air pollution control equipment exclusively venting organic gases from hot mix asphalt load-out operations and directly related equipment are exempt from all requirements.
 - ◆ Fabric filters or cartridge-type baghouses with a filter area less than or equal to 100 ft², facility operations subject to District Rule 1469 (chromium electroplating and chromic acid anodizing operations), and portable dust collectors with a maximum rated capacity of less than 3,000 cfm, and HEPA equipment are exempt from all requirements, except the no visible emissions requirement.
 - ◆ Baghouses venting non-continuous processes, baghouses with a filter area less than or equal to 7,500 ft² voluntarily equipped with a BLDS, and bin vents are exempt from visible emissions observation requirements.
 - ◆ For PM control devices connected in series, the PM limit, verified filtration products installation, and visible emissions observation only apply to the control device exhausting to the atmosphere. A Tier 3 baghouse that is not the last in the series to vent to the atmosphere is exempt from the BLDS installation requirement.

Please see the rule for additional details regarding specific requirements: (<http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1155.pdf?sfvrsn=4>). Any questions on the rule should be directed to Mr. Hugh Heney, Supervising Air Quality Inspector at (909) 396-2372 or via email hheney@aqmd.gov.

Frequently Asked Questions About Rule 1155 Implementation

Visible Emissions Observation

Question #1: Is there a certification process necessary to become trained in reading visible emissions using US EPA Method 22?

Response #1: No, Method 22 requires no certification; however, self-training and knowledge of implementing the method is required per Rule 1155(e)(1) to conduct visible emissions observation.

Question #2: Would the AQMD consider a person “trained” per Rule 1155 if they read US EPA Method 22 and the visible emission evaluation (VEE) handbook?

Response #2: A person would be considered trained if they read and were correctly able to implement the US EPA Method 22 procedures as described in the documents.

Question #3: Where can Method 22 training be obtained? Is there any equivalent training material to US EPA documents?

Response #3: Method 22 training is to be obtained from written US EPA materials found in the reference in the Method 22 document or from the lecture portion of the Method 9 certification course. CARB’s VEE handbook can be considered as an equivalent training material with regard to Method 22 training. Training materials can be obtained from the District website at: (TBD).

Question #4: Is it up to the facility whether reading visible emissions pursuant to US EPA Method 22 is conducted by the facility staff or by a contracted person?

Response #4: Yes, it is up to the facility.

Question #5: Does the visual observer need to attend an US EPA Method 22 training class? If yes, do AQMD or other agencies offer such training? When and where?

Response #5: The visual observer does not need to attend a VEE training class to conduct Method 22. The observer needs to train him/herself using handbooks in conjunction with Method 9 training. It is at the observer’s discretion whether to attend such a class. The VEE class is offered by CARB for US EPA Method 9, in which Method 22 is included as an elemental precursor to conducting Method 9 observations. The information on the VEE class can be found in the link: <http://ssl.arb.ca.gov/training/courselist.php>

Question #6: Does Method 22 only apply to fugitive emissions, as opposed to the actual control equipment exit stack, for which Method 9 applies?

Response #6: No, Method 22 applies to any emissions from any part of the control equipment, including fugitive emissions from leaks or gaps in the equipment and any visible emissions by means of an exhaust stack.

Question #7: We plan to offer Method 22 training to our customers as a general service. We would also provide Method 22 training documents and recordkeeping form(s) on our website. Can we link to the AQMD's website as part of this offer?

Response #7: You may develop and provide Method 22 training guidance to the general public or interested facilities inclusive of links to the pertinent AQMD web pages. However, the AQMD cannot endorse any third party training program and each facility is responsible for complying with the applicable requirements of the rule.

Verified Filtration Products

Question #8: Screening is a way of testing filter media using the same test method and equipment as used in the US EPA's Environmental Technology Verification (ETV) program, without running through the ETV program, to qualify a product as being verified. Are screening tests accepted as an equivalent demonstration of verified filtration products under the ETV program?

Response #8: An ETV verification statement should be obtained through direct testing via Air Pollution Control Technology Verification Center or acceptance under ETV's existing data policy. The screening test, in and of itself, would not meet the stringency under the ETV program. Rather, testing would need to follow the entire ETV test and Quality Assurance (QA) plan to be accepted as an equivalency demonstration of verified filtration products under the ETV program.

Shaker Baghouse Upgrade

Question #9: Is a permit application required to upgrade a manual shaker to a mechanical shaker?

Response #9: Yes, a permit modification is required for an existing manual shaker to be upgraded.

Question #10: An old baghouse will be replaced with a newer one of the same kind. Will there a permit be required for the replacement?

Response #10: If they are functionally identical, such as flow rate, filter area, or efficiency (the same or better) and there are no increased emissions, a permit will be needed for functionally identical replacement.

Bag Leak Detection System

Question #11: Do baghouses that are retrofitted with BLDS require permit modifications?

Response #11: Yes, a baghouse retrofitted with a BLDS will need an administrative change of condition. This has a lower fee than a full permit modification.

Question #12: Which forms are to be submitted for a BLDS permit application for baghouse?

Response #12: The applicant needs to submit Form 400-E-1 for an administrative change of condition.

Question #13: There is a stand-alone cyclone control equipment exhausting to the atmosphere. Is the cyclone exempt from weekly visible emissions observation if BLDS is installed?

Response #13: A BLDS is transferrable to other PM air pollution control devices. Thus, the cyclone may be exempt from weekly visible emissions observation, if BLDS is installed.

Question #14: I have a couple of asphalt plants that are mothballed (idle) right now that have Tier 3 baghouses. How soon after operation re-commences would you expect an application for a BLDS?

Response #14: The equipment needs to have a permit and a BLDS installed before the equipment begins operation.

Question #15: Rule 1155(e)(6) requires source test for Tier 3 baghouse PM concentration. Is this for all Tier 3 baghouses regardless of the type of dust they collect?

Response #15: Source test requirements (per (e)(6)) apply to Tier 3 baghouses located at Title V facilities, regardless of the type of dust.

Question #16: Does Rule 1155 apply to Rule 219 exempt baghouses?

Response #16: No, Rule 219 exempt baghouses are not subject to the provisions of the rule, including source tests, because Rule 219 exempt control devices do not require a permit to operate.

Exemptions

Question #17: An air stream of a process is filtered using a cartridge filter. The filter is changed as part of a regular maintenance activity, during which the air stream is exhausted to the atmosphere. Is this process exempt from visible emissions observation requirement pursuant to Rule paragraph (g)(7)?

Response #17: No. Although the changing of the filters is a maintenance activity, the exemption is regarding start-up after the scheduled maintenance. Since the equipment continues to operate while changing filters, the exemption does not apply. If when changing the filters, the process continues and visible emissions occur, the rule provision of no visible emissions (per (d)(1)) is violated.

Question #18: If a PM control device at our facility is temporarily shut down for an extended period (greater than one week) of time for some reason, is the operator of the control device exempt from the visible emissions observation requirement per Rule (g)(2) exemption?

Response #18: No, the (g)(2) exemption does not apply because a temporary shutdown does not qualify as a non-continuous operation. Rather, the operator is not required to conduct Method 22 tests while the PM control equipment is not in operation for the extended period, provided no process activity takes place and records regarding the operational status of the equipment are maintained.

Question #19: If a facility operator has air pollution control (APC) equipment that is exempt from the weekly Method 22 observation pursuant to paragraph (g)(2) as a non-continuous operation, would that equipment likewise be exempt from monthly Method 22 observation if the APC equipment is outfitted with EPA's verified filtration products pursuant to paragraph (e)(2)?

Response #19: If the APC equipment is exempt from weekly Method 22 observation pursuant to (g)(2), it would be likewise exempt from monthly Method 22 observation pursuant to paragraph (e)(2) by default, provided no visible emissions occur at any time.