

Proposed Rule 444.1 (PR 444.1)

Particulate Matter Emission Reductions from Forestry and Agricultural Waste

Proposed Amended Rule 401 (PAR 401)

Visible Emissions

Proposed Amended Rule 404 (PAR 404)

Particulate Matter - Concentration

Proposed Amended Rule 405 (PAR 405)

Solid Particulate Matter - Weight

Proposed Amended Rule 219 (PAR 219)

Equipment Not Requiring A Written Permit Pursuant To Regulation II

Proposed Amended Rule 222 (PAR 222)

Filing Requirements For Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II

Public Workshop

March 25, 2026



Join Zoom Meeting:

<https://aqmd.zoomgov.com/j/1613343231>

Meeting ID: 1613343231

Dial in: +1 669-254-5252

Agenda

Background and Overview

Proposed Rule 444.1

Proposed Amended Rule 401, Proposed Amended Rule 404, Proposed Amended Rule 405

Proposed Amended Rule 219 and Proposed Amended Rule 222

Impact Assessments

Next Steps

Background

The majority of forestry and agricultural waste is currently disposed of through uncontrolled open burning which generates high levels of particulate matter (PM)

Implementing fuel reduction strategies, such as air curtain incinerators (ACIs) and prescribed fire vehicles, is crucial for effective wildfire prevention and PM reduction

Currently, ACIs and prescribed fire vehicles are not operated within South Coast AQMD's jurisdiction, as they have not demonstrated compliance with:

- Rule 401 – Visible Emissions
- Rule 404 – Particulate Matter - Concentration
- Rule 405 – Solid Particulate Matter - Weight

ACIs and prescribed fire vehicles emit high levels of PM, but are a cleaner alternative to open burning



Need for Proposed Rules

Providing a pathway for the use of ACIs and prescribed fire vehicles will help reduce PM emissions from forestry and agricultural waste management practices

- South Coast AQMD staff received interest from government agencies to operate vegetative fuel reduction technologies for wildfire prevention

Rule development was initiated to:

- Partially implement Best Control Measure 20: Application of All Feasible Measures from the 2024 South Coast Air Basin Attainment Plan for the 2012 Annual PM_{2.5} standard
- Implement objectives in the Community Emission Reduction Plan for the AB 617 community of Eastern Coachella Valley



Overview of Rulemakings

PR 444.1

- Establishes requirements for ACIs and prescribed fire vehicles used to reduce vegetative waste

PAR 401, PAR 404, and PAR 405

- Exempts ACIs and prescribed fire vehicles subject to PR 444.1

PAR 219 and PAR 222

- Allows for registration of ACIs and prescribed fire vehicles in lieu of permit

Proposed

Rule

444.1

PR 444.1 Purpose and Applicability

Purpose – Subdivision (a)

- To reduce PM emissions from forestry and agricultural waste management practices and establish requirements for equipment used to reduce vegetative waste

Applicability – Subdivision (b)

- PR 444.1 will apply to owners and operators of ACIs and prescribed fire vehicles



PR 444.1 Key Definitions - Subdivision (c)



AIR CURTAIN INCINERATOR means an incinerator, carbonator, or mechanized burner that operates by forcefully projecting a curtain of air across an open, integrated combustion chamber or open pit or trench in which combustion occurs



PRESCRIBED FIRE VEHICLE means a mobile machine designed for wildfire prevention by performing mechanized controlled burns of low vegetation to create fuel breaks



VEGETATIVE WASTE means Wood Waste, Yard Waste, and Agricultural Waste

- Definitions for wood waste and yard waste mirror those in 40 CFR Part 60 Subpart EEEE
- Definition for agricultural waste was modified from Rule 444

PR 444.1 General Requirements - Subdivision (d)

Paragraph (d)(1)

- An owner or operator shall burn solely vegetative waste in an ACI or prescribed fire vehicle

Paragraph (d)(2)

- Only government agencies and their contractors can operate ACIs and prescribed fire vehicles

Paragraph (d)(3)

- Equipment must be properly maintained and kept in good operating condition at all times to minimize emissions of air contaminants

Paragraph (d)(4)

- ACIs and prescribed fire vehicles must not burn vegetative waste when winds are ≥ 20 mph

Paragraphs (d)(5)

- Ashes removed must be handled, stored, and disposed of in a manner to reduce visible emissions

Paragraph (d)

- Must obtain a burn authorization number from the Executive Officer for each day and for each location of operation
- Must request burn authorization number by 4 p.m. on the day prior to burning

PR 444.1 Cold Start Requirements for ACIs

Subparagraph (e)(1)(A)

- Contains requirement to use a propane torch, drip torch, or flare as ignition devices

Subparagraph (e)(1)(B)

- Accelerants such as gasoline, diesel fuel, kerosene, turpentine, etc. shall not be used



PR 444.1 Engine and Fuel Requirements for ACIs

Paragraph (e)(2)

- Any internal combustion engine used to power the air curtain in an ACI must meet U.S. EPA Tier 4 emission standards

Paragraph (e)(3)

- Sulfur content in any diesel fuel used in an ACI must meet CARB standards in Title 13 CCR Section 2281



PR 444.1 Best Management Practices for ACIs

Paragraph (e)(4)

Vegetative waste loaded into the combustion chamber must remain below the manufacturer's maximum loading capacity and below the level of the air curtain

Paragraph (e)(5)

Includes requirement to monitor ACI when vegetative waste is actively burning or flames are visible inside the combustion chamber

Paragraph (e)(6)

Ensure air curtain is operated continuously according to manufacturer's recommended airflow setting until there are no visible flames and waste is burned to completion

Paragraph (e)(7)

Ash must not accumulate to greater than 1/3 the depth of the combustion chamber, or to a level that impedes combustion, whichever occurs first

PR 444.1 Monitoring Requirements for ACIs

Subdivision (f) mirrors requirements in 40 CFR Part 60 Subpart EEEE

- An initial opacity test within 60 days after ACI reaches charge rate, but no later than 180 days after initial startup
- An opacity test once every 12 calendar months from the date of initial startup
- Opacity testing conducted using U.S. EPA Method 9
- Opacity testing conducted by an observer certified in U.S. EPA Method 9
- Opacity limitation of 35% during startup period
- Opacity limitation of 10% during normal operation



PR 444.1 Prohibitions – Subdivision (g)

PR 444.1 prohibits the following:

- Burning of controlled substances
- Operation of an ACI within 1,000 feet of a sensitive receptor



Maintenance Requirements – Subdivision (h)

- An owner or operator must maintain an ACI or prescribed fire vehicle as recommended in the operating and maintenance manual
- The owner or operator must keep a copy of the manufacturer's operating and maintenance manual and provide it to the Executive Officer within 48 hours of request



Source Testing Requirements – Subdivision (i)

- Includes requirement to allow the Executive Officer to conduct a source test within 6 months of initial request from the Executive Officer
- Requirement will aid South Coast AQMD in collecting emissions information for future PR 444.1 amendments



PR 444.1 Recordkeeping Requirements – Subdivision (j)

Paragraph (j)(1)

- Visible emission records pursuant to subdivision (f)
- Records of current and valid U.S. EPA Method 9 certification
- Records must be kept for a minimum of 5 years

Subparagraphs (j)(2)(A) – (j)(2)(E)

- Daily operation logs
- Records must be kept for a minimum of 5 years

Paragraph (j)(3)

- Maintenance logs
- Records must be kept for a minimum of 5 years

Paragraph (j)(4)

- Government contract records, if applicable

Proposed Amended Rule 401, 
Proposed Amended Rule 404,
and
Proposed Amended Rule 405

PAR 404, PAR 405, and PAR 401

PAR 404 –
Subdivision (f)

PAR 405 –
Subdivision (e)

- Adds an exemption from PM limits for ACIs and prescribed fire vehicles

PAR 401–
Paragraph (c)(3)

- Adds an exemption from visible emissions requirements for ACIs and prescribed fire vehicles

Proposed Amended Rule 219 
and
Proposed Amended Rule 222

PAR 219 and PAR 222

PAR 219

Subparagraph (d)(17)(F)

- Exempts ACIs, prescribed fire vehicles, and associated air pollution control equipment from permits provided:
 - Not subject to Regulation XXX – Title V Permits;
 - Only used to burn agricultural waste, wood waste, or yard waste; and
 - Operated by government agencies and their contractors
- Engines or other internal combustion equipment with greater than 50 HP are not exempt under this provision
- Associated definitions included

PAR 222

Paragraph (b)(1)

- Requires ACIs, prescribed fire vehicles, and associated air pollution control equipment exempted from PAR 219 to be registered
- Associated definitions included

Impact Assessments



Costs and Emission Impacts

Costs

- PR 444.1 will not require the use of ACIs and prescribed fire vehicles
 - Opting to use them will include operational costs such as registration fees and fuel costs

Emission Impacts

- The proposed amendments will reduce PM emissions compared to open burning
- More robust emission data is necessary to establish emission limits and quantify emission reductions from PR 444.1



California Environmental Quality Act (CEQA)

CEQA Analysis

- PR 444.1, PAR 401, PAR 404, PAR 405, PAR 219 and PAR 222 (Proposed Project) will provide more flexibility for preventing wildfires
 - Reducing vegetative fuel is essential to mitigating and preventing wildfires in order to protect the public from an emergency
 - ACI technology is a less-emitting method when compared to open burning
- Proposed Project qualifies for a statutory exemption per CEQA Guidelines Section 15269(c) – Specific actions necessary to prevent or mitigate an emergency
- A Notice of Exemption from CEQA will be prepared

Socioeconomic Impacts

Socioeconomic Impact Assessment

- Analysis will consider:
 - Types of affected industries, including small businesses
 - Range of probable costs, including costs to industry or business
- Socioeconomic Impact Assessment will be made available in the Draft Staff Report at least 30 days prior to the Public Hearing on June 5, 2026 (subject to change)

Next Steps



Next Steps

Written comments requested by April 8, 2026



Stationary Source Committee scheduled for
April 17, 2026



Set Hearing scheduled for May 1, 2026



Public Hearing scheduled for June 5, 2026

Please note that under the California Public Records Act (Gov. Code Section 7920.000 et seq.) your written and oral comments, attachments, and associated contact information (e.g. your address, phone, email, etc.) become part of the public record and can be released to the public on request or posted on the South Coast AQMD website.

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