

BOARD MEETING DATE: January 8, 2027

AGENDA NO.

PROPOSAL: Determine That Proposed Amended Rule 401 – Visible Emissions, Is Exempt from CEQA; and Amend Rule 401

SYNOPSIS: Proposed Amended Rule 401 will exempt smoke tests required by South Coast AQMD from visible emissions requirements and establish specific requirements for smoke tests conducted at petroleum refineries and facilities with related operations to petroleum refineries.

COMMITTEE: Stationary Source, November 20, 2026, Pending

RECOMMENDED ACTIONS:

Adopt the attached Resolution:

1. Determining that Proposed Amended Rule 401 – Visible Emissions, is exempt from the requirements of the California Environmental Quality Act; and
2. Amending Rule 401.

Wayne Natri
Executive Officer

SLR:MK:MM:IS:NR

This Board Letter serves as the Staff Report for the proposed amendments to Rule 401 – Visible Emissions (Rule 401).

Background

Rule 401 was adopted on February 4, 1977, to regulate visible emissions from any source. Rule 401 limits visible emissions from the discharge of smoke, dust, and other air contaminants into the atmosphere at a specified opacity level for a limited time period. Rule 401 was subsequently amended 12 times to provide exemptions for various types of equipment or operations.

Smoke tests are a qualitative test where visible smoke is generated to test equipment for leaks or demonstrate the capture efficiency of an emission control device. Smoke is generated using equipment such as smoke matches, smoke cartridges, smoke bulbs (hand pumps), and handheld smoke machines. Smoke tests can be used to detect leaks from boilers, heaters, and other external combustion devices. Smoke tests are considered a best-practice diagnostic test and are used in many industries including chrome-plating, metal melting, and metal cutting. However, conducting a smoke test

may result in brief visible emissions that do not comply with the opacity and time limitations in Rule 401.

Conducting a smoke test during a turnaround at a petroleum refinery can help identify leaks and verify the efficacy of emission controls before the equipment returns to normal operation. A refinery turnaround is a planned shutdown of a process unit or entire facility to perform maintenance, repairs, and upgrades to equipment in order to ensure safety and efficiency in operations. Turnarounds typically occur every 3-5 years for refinery equipment, but some units have turnaround schedules that are 9 years or longer.

Proposed Amended Rule 401 (PAR 401) will establish specific requirements for smoke tests conducted at petroleum refineries and facilities with related operations to petroleum refineries and exempt smoke tests required by South Coast AQMD from visible emissions requirements.

Proposed Amendments

PAR 401 paragraph (b)(4) establishes specific requirements for smoke tests conducted on external combustion equipment and their associated air pollution control equipment located at a petroleum refinery and facilities with related operations to petroleum refineries. External combustion equipment burns fuel outside the main chamber of the basic equipment. Examples of external combustion equipment can include boilers, heaters, and incinerators. Associated air pollution control equipment includes ducting. Paragraph (b)(4) does not require the use of smoke tests, but rather, establishes requirements if a person opts to conduct a smoke test at a petroleum refinery or facility with related operations to petroleum refineries.

Paragraph (b)(4) requires that visible emissions from smoke tests conducted at a petroleum refinery or related operation have an opacity limit of less than No. 2 on the Ringelmann Chart or less than 40% opacity for no more than 30 minutes in any one hour. PAR 401 requires the smoke test to be conducted solely during turnarounds and also requires the Executive Officer to be notified at least 72 hours prior to conducting a smoke test. The facility may provide a time range of up to 24 hours in the notification to account for minor changes in service schedules.

Additionally, PAR 401 paragraph (c)(4) exempts smoke tests required by South Coast AQMD from visible emissions requirements. Examples include South Coast AQMD requirements to conduct smoke tests in rules, permits, source test protocols, Health Risk Assessments under Assembly Bill 2588, the Air Toxics “Hot Spots” Information and Assessment Act; and per the Hearing Board. Smoke tests are already required in certain South Coast AQMD rules such as Rule 1407 – Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Chromium Metal Melting Operations, Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities, and

Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations. Any smoke test required by South Coast AQMD at petroleum refineries and facilities with related operations to petroleum refineries, regardless of equipment type, would also be exempt under PAR 401 paragraph (c)(4). PAR 401 also includes minor editorial changes for clarity and consistency.

Public Process

Staff will hold a Public Workshop for PAR 401 on October 28, 2026, to present the proposed amended rule to stakeholders and to solicit comment.

Emission Reductions

Smoke tests aid in detecting emission leaks and demonstrating capture efficiency of emission control systems, which will alert equipment operators to facilitate necessary repairs to prevent or minimize excess emissions. PAR 401 will not result in any emission reductions.

Costs and Cost-Effectiveness

PAR 401 will not require the use of smoke tests and therefore is not expected to impose any additional costs. A cost-effectiveness and incremental cost-effectiveness analysis are not required pursuant to Health and Safety Code Section 40920.6 because PAR 401 does not include new Best Available Retrofit Control Technology requirements.

Key Issues

Staff is not aware of any remaining key issues.

California Environmental Quality Act (CEQA)

Pursuant to CEQA Guidelines Sections 15002(k) and 15061, the proposed project (PAR 401) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption will be prepared pursuant to CEQA Guidelines Section 15062. If the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Land Use and Climate Innovation.

Socioeconomic Impact Assessment

A socioeconomic impact assessment is not required by Health and Safety Code Sections 40440.8 and 40728.5 and has not been prepared because PAR 401 contains administrative changes that will not significantly affect air quality or emission limitations, and thus, will not result in significant socioeconomic impacts.

Comparative Analysis

PAR 401 does not impose a new or more stringent emissions limit or standard, or a new or more stringent monitoring, reporting, or recordkeeping requirement. Therefore,

consistent with Health and Safety Code Section 40727.2 (g), no comparative analysis is required.

AQMP and Legal Mandate

The Health and Safety Code requires the South Coast AQMD to adopt an Air Quality Management Plan (AQMP) to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, the Health and Safety Code requires the South Coast AQMD to adopt rules and regulations that carry out the objectives of the AQMP. PAR 401 is not part of any control measure in the 2022 AQMP.

Resource Impacts

Existing staff resources are adequate to implement the proposed amendments.

Draft Findings Under Health and Safety Code 40727

Before adopting, amending, or repealing a rule, Health and Safety Code Section 40727 requires the South Coast AQMD Governing Board to make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the Public Hearing. The draft findings are as follows:

Necessity – A need exists to amend Rule 401 to exempt smoke tests required by South Coast AQMD from visible emissions requirements and establish specific requirements for smoke tests conducted at petroleum refineries and facilities with related operations to petroleum refineries.

Authority – The South Coast AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, 40725 through 40728, 41508.

Clarity – PAR 401 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency – PAR 401 is in harmony with and not in conflict with or contradictory to existing statutes, court decisions, or state or federal regulations.

Non-Duplication – PAR 401 will not impose the same requirements as any existing state or federal regulations, and the proposed amendment is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference – In amending this rule, the following statutes which the South Coast AQMD hereby implements, interprets or makes specific are referenced: Health and Safety Code Sections 39002, 40001, 40406, 40702, 40440, and 40725 through 40728.5.