Rule 445 – Wood-Burning Devices

• Applies to residential fireplaces or wood-burning stoves
• Intended to help reduce ambient fine particulate (PM2.5) levels
  • Increased mortality
  • Cardiovascular and respiratory impacts
• Key to attainment of health based National Ambient Air Quality Standards (NAAQS)
  • Approximately 20% of area-wide PM2.5 is from wood-burning devices
  • Currently nonattainment for the 2012 annual and 2006 24 hour PM2.5 NAAQS
Rule Requirements

• New developments
• Existing devices
• Seasoned wood fuel
• Non-wood fuel burning prohibition
• Wood-burning curtailment “No-Burn” day
  • Unhealthful levels of ambient PM2.5 forecast
  • Wood-burning prohibited
  • Source Receptor Area or Basin-wide

Exemptions From Wood-Burning Curtailment

• Sole source of heat
• Low-income households
• No natural gas service within 150 feet
• ≥3,000 feet above mean sea level
• Ceremonial Fires exempted under Rule 444 – Open Burning
Reason for Proposed Amendment

- Implement control contingency measure BCM-09 from 2016 AQMP
  - Further reducing PM2.5 emissions from wood-burning devices
- Address CAA contingency measure requirements for PM2.5
  - Requiring specific measures in case of a failure to comply
  - Specified in 40 CFR Section 51.104(a)
- Proposed amendment would add contingency measures increasing number of No Burn days

South Coast AQMD Source Receptor Areas (SRAs)

PAR 445 Attachment 1
Air Quality Forecasting

- PAR 445 (c)(16) Source Receptor Area (SRA)
- Forecast at SRA level
- Daily forecast used for No-Burn day
- PAR 445(c)(3) Daily PM2.5 Air Quality Forecast
  “means the predicted ambient average PM2.5 concentration, for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.”
- Hourly PM2.5 air quality forecast – advisory only
- http://www.aqmd.gov/home/air-quality/air-quality-forecasts

Annual Ambient PM2.5 Basin-wide Trend*

PM2.5 levels are decreasing but still above the 12 ug/m³ standard

*Basin-wide historical Federal Reference Method ambient PM2.5 annual average maximum concentrations.
**2019 DATA IS PRELIMINARY AND SUBJECT TO CHANGE.
PM2.5 National Ambient Air Quality Standards (NAAQS)

- Health based revisions

<table>
<thead>
<tr>
<th>Adopted</th>
<th>Standard</th>
<th>Measuring Period</th>
<th>South Coast AQMD Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>65 μg/m³</td>
<td>24-Hour Average</td>
<td>Attained</td>
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<tr>
<td></td>
<td>15 μg/m³</td>
<td>Annual Average</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>35 μg/m³</td>
<td>24-Hour Average</td>
<td>Attainment Due December 31, 2019</td>
</tr>
<tr>
<td>2012</td>
<td>12 μg/m³</td>
<td>Annual Average</td>
<td>Attainment Due December 31, 2021</td>
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</table>

Rule 445(c)(6) **Current** No-Burn Day Provision

- During wood-burning season – November – February
- Triggered when PM2.5 levels forecast > 30 μg/m³ for a specific source/receptor area
- Applies Basin-wide if PM2.5 levels > 30 μg/m³ predicted for a source/receptor area with monitoring data showing a violation of the 24 hour PM2.5 NAAQS in either of the two previous three year design value periods.
PAR 445(e) “No-Burn” Day Provision

Wood-Burning Season* Mandatory Winter Burning Curtailment

No person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season so declared to the public by the Executive Officer to be a mandatory winter wood-burning curtailment day during the wood-burning season when a mandatory winter burning curtailment based on the specified geographic area and applicable daily PM2.5 air quality forecast threshold for the specified geographic area, 3,000 or less feet below mean sea level and applicable daily PM2.5 air quality forecast as follows: is forecast for the specific region where the device is located, or on a Basin-wide basis as defined in paragraph (c)(6).

(1) Basin-wide if the daily PM2.5 air quality forecast for any source receptor are exceeds 30 µg/m³, or

(2) the entire South Coast Air Basin whenever the daily PM2.5 air quality forecast exceeds 30 µg/m³ for a Source Receptor Area (SRA) containing a monitoring station that has recorded a violation of the federal 24-hour PM2.5 National Ambient Air Quality Standard for either of the two previous three-year design value periods. The design value is the three-year average of the annual 98th percentile of the 24-hour values of monitored ambient PM2.5 data, or

(3) subsequent to a determination by U.S. EPA, pursuant to 40 CFR §51.104(a) of non-attainment with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast threshold for the specified geographic area as set forth in subdivision (f) Contingency Measures.

* Defined in Rule 445(c)(21) as the consecutive entire months of November, December, January and February.

PAR 445(f) Contingency Measures

(1) Upon the issuance of a final determination by U.S. EPA, pursuant to 40 CFR §51.104(a), that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:

(A) meet any Reasonable Further Progress (RFP) requirement in an attainment plan approved in accordance with §51.1012;
(B) meet any quantitative milestone in an attainment plan approved in accordance with §51.1013;
(C) submit a quantitative milestone report required under §51.1013(b); or,
(D) attain the applicable PM2.5 NAAQS by the applicable attainment date,

the contingency measure(s) specified in paragraph (f)(2) shall be implemented, sequentially and in the order of stringency.

(2) A Basin-wide, mandatory wood-burning curtailment during the wood-burning season if the daily PM2.5 air quality forecast for any SRA exceeds:

(A) 29 µg/m³, upon a final determination of a failure to comply with any of the provisions of paragraph (f)(1);
(B) 28 µg/m³, upon a final determination of a failure to comply with any two of the provisions in paragraph (f)(1)
(C) 27 µg/m³, upon a final determination of a failure to comply with any three of the provisions in paragraph (f)(1)
(D) 26 µg/m³, upon a final determination of a failure to comply with any four of the provisions in paragraph (f)(1).
PAR 445 Example

IF, upon a final determination of a failure to:

<table>
<thead>
<tr>
<th>Event</th>
<th>Threshold Reduction</th>
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<tbody>
<tr>
<td>attain the applicable PM2.5 NAAQS by the applicable attainment date</td>
<td>1st Threshold Reduction 29 µg/m³</td>
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<td>(e.g., 2006 24-hour) – 1st Trigger</td>
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<tr>
<td>meet any quantitative milestone in an attainment plan approved in</td>
<td>2nd Threshold Reduction 28 µg/m³</td>
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<td>accordance with §51.1013 – 2nd Trigger</td>
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<td>meet any Reasonable Further Progress (RFP) requirement in an</td>
<td>3rd Threshold Reduction 27 µg/m³</td>
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<td>attainment plan approved in accordance with §51.1012 - 3rd Trigger</td>
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<tr>
<td>submit a quantitative milestone report required under §51.1013(b)</td>
<td>4th Threshold Reduction 26 µg/m³</td>
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<td>– 4th Trigger</td>
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Estimated PM2.5 Emission Reductions

<table>
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<tr>
<th>No-Burn Day Threshold Mandatory Basin-wide Curtailment (µg/m³)</th>
<th>Total Additional Reductions Beyond Current Rule (TPY)</th>
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<tbody>
<tr>
<td>30</td>
<td>25.4</td>
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<tr>
<td>29</td>
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<td>27</td>
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<tr>
<td>26</td>
<td>100.1</td>
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Public Outreach


Rule Development Schedule

* Please submit comments by March 13, 2020 *

March 20, 2020 - Stationary Source Committee Meeting

April 3, 2020 - Set Hearing

May 1, 2020 - Public Hearing
Questions or Comments

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