



Maryland
Department of
the Environment

**Opacity for Fuel-Burning Equipment
COMAR 26.11.09.05
and
CEM Applicability
COMAR 26.11.01.11**

Stakeholder Meeting – November 1, 2016

Topics Covered

- Opacity Regulation Background
- COM Affected Facilities
- Maryland Opacity Regulations
- EPA SSM SIP Policy
- Regulatory Actions
- EPA SSM Seven Criteria
- Continuous Emission Monitor applicability



Maryland
Department of
the Environment

Opacity Regulation Background

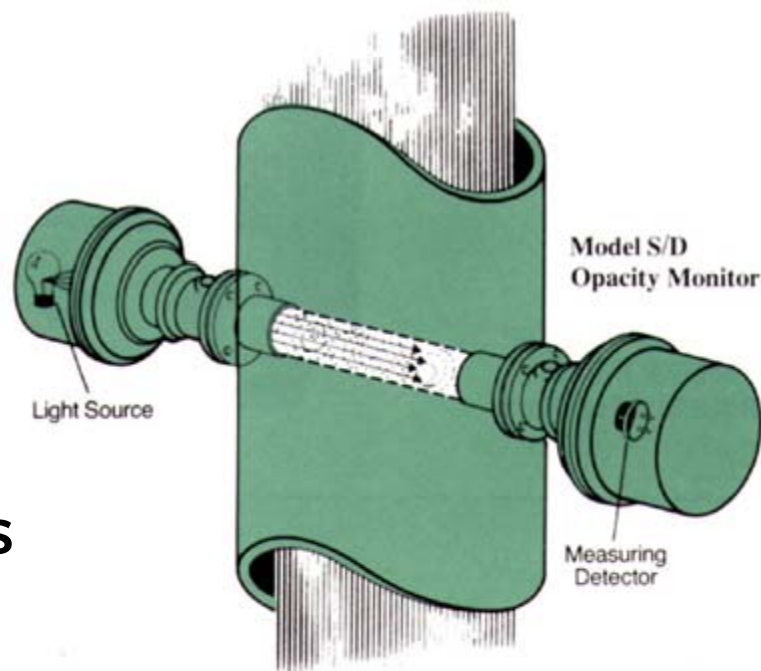
- Opacity regulations have been in place since the early 1970's
- Visible Emission (VE) Standard:
 - No visible emissions (10%) in urban areas
 - 20% visible emissions in rural areas
- VE Exception (COMAR 26.11.06.02A(2))
 - VE <40% during start-up, soot blowing, load changes, adjustments and cleaning
 - VE may not occur for more than 6 minutes every hour



Maryland
Department of
the Environment

Opacity Test Methods

- EPA Method 9
 - Visual determination of opacity by qualified observers
- Continuous Opacity Monitors (COMs)
 - MDE adopted regulations in 1991 requiring certain major stationary sources to operate COMs
 - Operate 24/7



Maryland
Department of
the Environment

COM Affected Facilities

- Fuel Burning Equipment
 - ≥ 250 MMBtu burning coal, oil, tars, waste combustion fluid
 - ≥ 100 MMBtu to < 250 MMBtu burning coal and constructed on or before June 19, 1984
- Cement Kilns
- Fluidized Combustor Beds
- Municipal Waste Combustors w/ burning capacity ≥ 35 tons per day



Maryland
Department of
the Environment

MDE Opacity Regulations

- 26.11.01.10 - Continuous Opacity Monitoring Requirements
- 26.11.01.11 - Continuous Emission Monitoring Requirements
- 26.11.06.02 – General Emission Standards
- 26.11.08.04, .08, .08-2 - Control of Incinerators
- 26.11.09.05 – Control of Fuel-Burning Equipment
- 26.11.30.05 - Control of Portland Cement Manufacturing Plants
- 26.11.31 - Quality Assurance Requirements for Continuous Opacity Monitors

Numerous other regulations contain opacity requirements...



Maryland
Department of
the Environment

EPA SSM SIP Policy

- On June 12, 2015, EPA issued a SIP Call (80 FR 33840)
 - In part, included EPA's longstanding interpretation of the CAA in that SIP provisions shall not include exemptions from emission limitations during SSM events
 - Emission limits must be applicable to the source continuously
 - Included recommendations for approvable alternative requirements
 - Requirements should be narrowly tailored and take into account technical limitations and control technology
- EPA then recommended seven criteria for developing emission limitations in SIP provisions that apply during startup and shutdown (more on that later...)



Maryland
Department of
the Environment

MDE Actions

- On July 20, 2016, MDE adopted an amendment to COMAR 26.11.01.10 – COM Requirements
 - Provides affected sources an avenue to pursue an alternative emission limit if needed during certain operating conditions

26.11.01.01 A(6) - Sources may request for approval by the Department and EPA an alternate limit for specific operating conditions in which the technological limitations of the control equipment adversely affects the ability of the source to comply with visible emissions limits by following the recommendations at 80 FR 33980. The alternate limit shall be submitted to EPA as a SIP revision and included in 40 CFR Part 52 Subpart V 52.1070(d) for Maryland Source Specific SIP revisions.



Maryland
Department of
the Environment

MDE Actions (cont.)

- Existing COMAR 26.11.09.05 contains emission limit exemptions that do not meet EPA's SSM Policy
- As of July 1, 2016, MDE has submitted all COMAR regulations pertaining to opacity to the EPA for inclusion into the Maryland SIP except for COMAR 26.11.09.05 – Visible Emissions (for Fuel burning Equipment).
 - EPA is currently reviewing the SIP packages for completion.
 - The Department proposes to amend COMAR 26.11.09.05 to remove the operating time exemptions for fuel burning equipment



Maryland
Department of
the Environment

COMAR 26.11.09.05

- Establishes visible emission standards for fuel-burning equipment
 - Urban: No VE, Method 9; 10% VE with COMs
 - Rural: 20% VE with Method 9 and COMs
- Exceptions: Existing COMAR 26.11.09.05A(3)
 - VE standards do not apply to emissions during load changing, soot blowing, startup, adjustments, or occasional cleaning of control equipment if:
 - VE < 40% and do not occur for more than 6 consecutive minutes an hour



Maryland
Department of
the Environment

COMAR 26.11.09.05A(4)

- Existing regulation contains operating time limit exemptions
- MDE will be repealing this section to meet EPA's SSM SIP Policy
- Should an alternative emission limit be needed by affected sources, such limit will need to be approved by MDE and EPA and meet EPA's SSM Seven Criteria policy



Maryland
Department of
the Environment

EPA SSM Seven Criteria

- Limited to specific, narrowly defined source categories using specific control strategies
- Use of the control strategy is technically infeasible during startup or shutdown periods
- Frequency and duration of operation in startup or shutdown mode are minimized to the greatest extent practicable
- State analyzes the potential worst-case emissions that could occur during startup and shutdown based on the applicable alternative emission limitation



Maryland
Department of
the Environment

EPA SSM Seven Criteria (cont.)

- All possible steps are taken to minimize the impact of emissions during startup and shutdown
- At all times the facility is operated in a manner consistent with good practice for minimizing emissions
- Owner or operator's actions during startup and shutdown periods are documented by properly signed, operating logs or other relevant evidence



Maryland
Department of
the Environment

Continuous Emission Monitors

- COMAR 26.11.01.11 shall be amended to update the applicability and general requirements for CEMs
- Additional sources required to operate CEMs
 - MWCs with a PTE of 25 tons/yr NO_x in urban areas (NO_x)
 - MWCs with a PTE of 100 tons/yr NO_x in rural areas (NO_x)
 - Sintering plants (VOCs)
 - Yeast manufacturing installations (VOCs)
 - Portland cement manufacturing plants (NO_x)



Maryland
Department of
the Environment

Schedule

- **March 13, 2017 – Air Quality Control Advisory Council**
- **June 2017- NPAs published in Maryland Register**
- **July 2017- Public Hearing**
- **September 2017 – Regulation Effective**
- **October 2017 - Submit State Plan to EPA**



Maryland
Department of
the Environment