

Amendments to
COMAR 26.11.09.01 &
.07 Definitions and
Control of Sulfur
Oxides from Fuel
Burning Equipment

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Overview



Background



Requirements
and
Standards



Affected
Sources



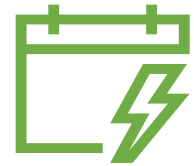
Compliance



Economic
Impact



Projected
Emission
Reductions



Schedule



Background

- This regulation amendment applies to facilities that burn distillate or residual fuel oil.
- Distillate fuel oil is a lighter fuel oil that has been refined more than heavier oils and is typically used for home heating.
- Residual fuel oil is the oil that is leftover after the distilling of the lighter fuel and is used for industrial practices and power generation.
- The Maryland Comptroller's Office regulation, COMAR 03.03.05.04, regulates distillate fuel oil and revised and lowered the limits in 2019. The MDE regulation, COMAR 26.11.09.07, has not been updated and therefore conflicts with 03.03.05.04. This action aligns MDE and the Comptroller's Office regulations for distillate fuel oil. This regulation amendment also proposes to lower sulfur content limits for residual fuel oil.





Background

- Section 169A of the Clean Air Act requires the U.S. EPA to address impaired visibility, also known as regional haze, in 156 national parks, forests and wilderness areas that have been federally designated as Class I areas.
 - In 1999, EPA issued the Regional Haze Rule, which requires states to develop SIPs to reduce haze-causing pollution to improve visibility in Class I areas.
 - EPA established five regional planning organizations across the nation to coordinate regional haze efforts, including the Mid-Atlantic Northeast Visibility Union (MANE-VU) of which Maryland is a member.
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Background

- In June 2007, the MANE-VU states agreed to pursue several regional strategies to reduce SO₂ emissions, the main contributor to visibility impairment in the region, including lowering the sulfur content in distillate and residual fuel oils. On August 25, 2017, MANE-VU signed a statement containing six “Asks” that the States with Class I Federal areas in MANE-VU wanted to be addressed in the long-term strategy of any MANE-VU member.
 - “Ask 3” of the 2017 MANE-VU statement urged MANE-VU states to pursue this standard as expeditiously as possible and before 2028, depending on supply availability, where the standards are as follows:
 - Distillate oil to 0.0015% sulfur by weight (15 ppm);
 - No. 4 residual oil within a range of 0.25 to 0.5% sulfur by weight; and
 - No. 6 residual oil within a range of 0.3 to 0.5% sulfur by weight
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Office of the Comptroller Fuel Limits

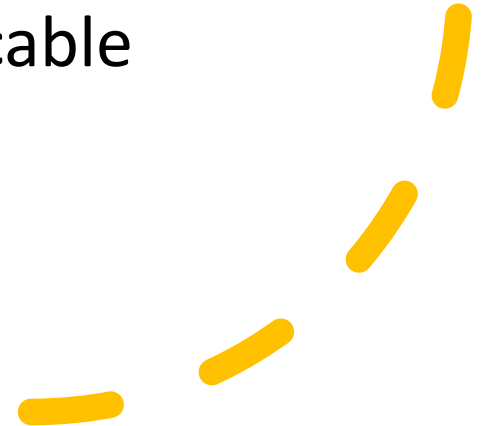
- Maryland's Comptroller Office had previously adopted amendments under COMAR 03.03.05.04, Specifications for distillate No. 1 and No. 2 Fuel Oil.
 - The amendments lowered the maximum allowable amount of sulfur in several stages.
 - The first stage reduced the maximum No. 1 and No. 2 fuel oil sulfur levels from .3% to .2% ppm in 2014.
 - The second stage reduced sulfur levels further to a level of .05% in 2016.
 - The third stage reduced sulfur levels further for No. 1 and No. 2 fuel oil to the MANE-VU "ASK" level of .0015% in 2019.
 - Since 2019, 03.03.05.04 has aligned with MANE-VU's distillate fuel oil standard, meaning distillate fuel oil purchased in Maryland has been meeting the distillate fuel oil sulfur content standard of .0015%.
 - Comptroller regulations do not address residual fuel oil. The MDE proposed regulations lower the residual fuel oil for No. 4, 5 & 6 to address the MANE-VU Ask.
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Affected Sources

Affected sources are mainly comprised of Electric Generating Units (EGUs), Boilers, Asphalt Plants, and Stationary Emergency Generators.

This regulation applies to the owner or operator of fuel-burning equipment combusting distillate or residual fuel oil, on or after January 1, 2026, within the state of Maryland. This regulation is applicable throughout the entire State.





Requirements and Standards

- Beginning January 1, 2026, a person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of:
 - 0.0015% (15 parts per million or ppm) sulfur by weight for distillate oil (No. 1 and No. 2 fuel oil); and
 - 0.3% (3,000 ppm) sulfur by weight for residual oil (No. 4, No. 5 and No. 6 fuel oil).
- The Department is removing sections of the regulation that provided exemptions for specific facilities that are no longer in operation and have permanently closed down.
- All regulatory requirements will now be applicable state-wide rather than by areas of the state.



Compliance: Recordkeeping and Recording Requirements

- New recordkeeping and reporting requirements are added to the regulation that apply to a person offering to sell or deliver fuel, or any person responsible for the equipment in which the fuel or process gas is burned.
- This section requires affected sources to maintain records of information for the Department to be able to determine compliance of the regulation.
- All records required must be made available to the Department upon request and maintained for five years from the date of creation.



Economic Impact

- Maryland's Comptroller of the Treasury adopted regulations which limited the sulfur content in No. 1 and No. 2 distillate home heating oil sold in Maryland to 15 ppm.
- The Department's research indicates that the majority of fuel oil being combusted within facilities, such as electric generating boilers and turbines and stationary emergency generators, is primarily distillate oil and has been required to meet the Comptroller limits previously.
- A few sources that use residual oil No. 4 – 6 report as meeting the proposed .3%.
- Other MANE-VU states already have both the distillate and residual fuel oil sulfur limits in place and compliant fuel is readily available.





Stakeholder Engagement

- The Department sent an email out on September 6, 2024 to stakeholders with a draft regulation and a fact sheet for review and comment.
 - Some powerplant facilities have distillate fuel oil on site that was purchased prior to the Comptroller regulations taking effect. This older fuel, and new compliant distillate or residual fuel that is purchased, is then blended within a tank, ultimately lowering sulfur content levels over time.
 - The proposed amendments include carry over provisions so that a person may burn fuel containing sulfur limits in excess of .0015% distillate or .3% residual that were purchased prior to January 1, 2026.
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Stakeholder Engagement

- The Department's research further indicates that the residual oil being combusted at asphalt plants currently meets the proposed limit in this action and facilities in Maryland are already purchasing residual fuel with a sulfur content percentage as low as .1% and up to .19%.
 - MDE's research indicates that powerplant facilities in Maryland are purchasing residual fuel oil under .3% which meets the proposed sulfur content limits.
 - Powerplant facilities may often blend .0015% distillate with residual fuel oils to make a lower sulfur fuel oil for combustion that generally ranges from .2-.25% or solely use distillate fuel oil for combustion.
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Projected Emission Reductions

- The Department's research indicates that SO₂ emissions of No. 6 fuel oil will, or have already been, reduced by over 80% as compared to existing COMAR limits.
 - The Department believes that similar reductions will be gained for No. 4 and No. 5 oil as compared to No. 6 oil reductions.
 - Reductions of the sulfur content for No. 2 fuel oil have been estimated to be 99.5% since the adoption of COMAR 03.03.05.04.
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Schedule

