



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Air Quality



Amendments to 25 *Pa. Code* Chapters 121 and 123:
Final-form Rulemaking:
Commercial Fuel Oil Sulfur Limits
for Combustion Units

Environmental Quality Board - October 16, 2012

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Background

- The purpose of the final-form rulemaking is to revise limits for sulfur content in commercial fuel oil used in residential and commercial/industrial boilers, furnaces and other heaters.
- The environmental and health benefits of lowering sulfur content in fuel are reduced sulfur dioxide (SO₂) and fine particulate matter (PM_{2.5}) emissions to decrease regional haze, improve visibility, and decreased health effects of PM_{2.5} exposure such as respiratory and cardiovascular disease.
- SO₂ emission reductions would be approximately 25,000 tons per year.

Background

- Pennsylvania is part of a regional planning organization, the Mid-Atlantic/Northeast Visibility Union (MANE-VU), established in 2000 to help the Northeast states plan for meeting regional haze requirements. MANE-VU states evaluated several categories for potential sulfur reductions and adopted a formal statement agreeing to pursue a regional low-sulfur oil strategy, along with emission reductions for certain electric generating units.
- This rulemaking is part of PA's federally-mandated efforts to meet 2018 reasonable progress goals for reducing regional haze in national parks and forests that may be affected by emissions from the Commonwealth.
- Many MANE-VU states have already adopted low-sulfur rules, most of which are more stringent than this final-form rulemaking.
- This rule, if finalized, will be submitted to EPA as a State Implementation Plan revision.

Rulemaking Schedule

- Proposed September 25, 2010 (40 Pa.B. 5456).
 - 65-day public comment period, closed November 29, 2010.
- Advance Notice of Final Rulemaking published June 23, 2012 (42 Pa.B. 3596)
 - 30-day public comment period, closed July 23, 2012.
- Air Quality Technical Advisory Committee and Citizen Advisory Council concurred with DEP's recommendation for the final rulemaking in September 2012, with no objection from the Small Business Compliance Advisory Committee.
- Final rulemaking must be provided to IRRC and Legislative Committees no later than November 29, 2012 in order to proceed.

Proposed Rulemaking

- Compliance date was May 1, 2012.
- Proposed statewide sulfur limits:
 - No. 2 oil (heating oil) - 15 parts per million (ppm)
 - No. 4 oil sulfur limit - 2500 ppm
 - No. 5, 6 oils - 5000 ppm
- Temporary suspension of the sulfur standards upon request if insufficient compliant fuel is reasonably available.
- Sampling and testing requirements established for refiners; quality assurance procedures for terminal operators.
- Recordkeeping and reporting (except for ultimate consumer), based on actual sulfur content.

Comments on 2010 Proposed Rule

- Comments submitted by owners/operators of refineries and a pipeline company, Pennsylvania Senator White, environmental groups, eight trade groups (petroleum, business, marketers, power generators, highway users), and IRRC.
- Supporters (distributors and environmental groups) cited cost savings for consumers and distributors, regional consistency, and emission reductions.
- Main concerns of fuel producers related to the stringency of the sulfur limit and the timeframe. They expressed support for a requirement for lower sulfur fuel but contingent upon a less stringent limit and a longer implementation timeframe.

Comments on 2010 Proposed Rule

- SO2 reductions not significant compared to emissions from other sectors.
- Cost of reduction from 500 to 15 ppm is much higher than the reduction from high sulfur to 500 ppm without any added economic benefit to consumers.
- Cost spikes are possible, particularly if the same sulfur limit is established as required for transportation fuels.
- Proposed limits for the heavier, residual oils too stringent and could cause supply problems.
- Temporary suspension provisions are unclear; they could provide disincentives for the manufacture of cleaner fuel.

➤ Advance Notice of Final Rulemaking

- Advance Notice of Final Rulemaking (ANFR) published June 23, 2012 (42 Pa.B. 3596)
 - 30-day public comment period, closed July 23, 2012.
- Compliance date revised to July 1, 2016, to provide adequate time for refineries, including PA operations, to meet new standards.
- No. 2 oil sulfur limit changed to 500 ppm.
- No. 4, 5, and 6 limits - 2500 and 5000 ppm, respectively, as proposed.
- Temporary suspension provision retained, but requirement for EPA concurrence removed.
- Revised sampling and testing to remove provisions for refiners and terminals, added provision for sampling/testing if a shipment lacks records.

Comments on ANFR

- Eight commentators; representatives of refineries and distributors, pipeline, representatives of electric generating company and association, a consultant and the Clean Air Council.
- Refinery commentators supported (or did not object to) the changes in fuel sulfur content level for No. 2 fuel oil and the new compliance date.
- The distributors association and Clean Air Council advocated a No. 2 fuel content level of 500 ppm in 2014, reduced to 15 ppm by 2016 or 2018.
- Additional suggestions from refinery/pipeline representatives so that rulemaking would better reflect existing practices and eliminate duplication.
- More specificity on circumstances for granting temporary suspension was requested.

Final-form Rulemaking

- Compliance date same as ANFR – July 1, 2016
- Sulfur limits same as ANFR:
 - 500 ppm for No. 2 oil
 - 2500 ppm for No. 4 oil
 - 5000 ppm for No. 5, 6 and heavier oils.
- Temporary suspension provisions include increased specificity, including a time duration of 60 days.
- Sampling, testing, recordkeeping and reporting provisions further revised to improve consistency with industry practice.

Requested Action

DEP recommends that the Board approve the final-form rulemaking that establishes new commercial fuel oil sulfur limits for combustion units.



Thank you.

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