

Executive Summary
Proposed Rulemaking
Revision of the Maximum Allowable Sulfur Content Limit
for No. 2 and Lighter Commercial Fuel Oil
25 Pa. Code Chapter 123

The Department of Environmental Protection (Department) proposes to amend Chapter 123 (relating to standards for contaminants) to reduce the maximum allowable sulfur content limit for No. 2 and lighter commercial fuel oil in the Commonwealth, generally sold for and used in residential and commercial furnaces and oil heat burners and furnaces for home or space heating, water heating, or both, from the current limit of 500 parts per million (ppm) to 15 ppm, beginning 60 days after publication of this rulemaking in its final form.

Purpose of the Proposed Rulemaking

This proposed rulemaking would allow the Department to address regional haze and visibility impairment. The sulfur dioxide (SO_2) emissions released by combustion of sulfur-containing No. 2 or lighter commercial fuel oil contribute to the formation of regional haze and fine particulate matter (fine particles or $\text{PM}_{2.5}$), both of which are serious public health and welfare threats and affect visibility. Fine particles have a diameter smaller than 2.5 micrometers, similar in size to the wavelength of light, and are most efficient, per unit of mass, at reducing visibility. Particles affect visibility through the scattering and absorption of light. Regional haze is visibility impairment produced by a multitude of sources and activities emitting SO_2 , nitrogen oxides (NO_x), $\text{PM}_{2.5}$, and $\text{PM}_{2.5}$ precursors, which are located across a broad geographic area. Visibility impairment is a humanly perceptible change in visibility (such as light extinction, visual range, contrast, and coloration) from the visibility that would have existed under natural conditions. Regional haze and visibility impairment affects urban and rural areas as well as Federal Class I areas (which include national parks, forests, and wilderness areas).

The Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7671q) and its implementing regulations at 40 CFR 51.300—51.309 mandate actions to protect visibility, especially in Federal Class I areas. The Federal regulations require restoration of natural levels of visibility in the mandatory Federal Class I areas by 2064. Additionally, states must consider, in their regional haze State Implementation Plans (SIP), the emission reduction measures identified by Class I States as being necessary to make reasonable progress in any Class I area. The CAA further authorizes the United States Environmental Protection Agency (EPA) Administrator to establish a transport region for visibility impairment when there is reason to believe that pollutants from one or more States contribute to visibility impairment in Federal Class I areas. The Commonwealth is a member of the Mid-Atlantic/Northeast Visibility Union (MANE-VU) Regional Planning Organization established in 2001 to assist the Mid-Atlantic and Northeast States in planning and developing their regional haze SIP revisions.

To address the impact of regional haze on mandatory Federal Class I areas within the MANE-VU region, the member States agreed to pursue a coordinated course of action to reduce the maximum allowable sulfur content of No. 2 and lighter commercial fuel oil to 500 ppm by weight (0.05% sulfur by weight) by no later than 2012 and to 15 ppm by weight (0.0015% by

weight) by 2016. On February 9, 2013, the Environmental Quality Board (Board) amended its regulations at 25 Pa. Code § 123.22 (relating to combustion units) to reduce the maximum allowable sulfur content limit for No. 2 and lighter commercial fuel oil to 500 ppm beginning July 1, 2016, rather than to 15 ppm, due to concerns at the time regarding the available supply of low-sulfur content No. 2 and lighter commercial fuel oil within various regions of the Commonwealth. See 43 Pa.B. 806. Since that time, the Department has determined that the availability of No. 2 and lighter commercial fuel oil within various regions of the Commonwealth and nationwide with 15 ppm of sulfur or less is no longer a concern. This proposed rulemaking is designed to implement the MANE-VU recommended strategy of a maximum allowable sulfur content limit of 15 ppm for No. 2 and lighter commercial fuel oil Statewide for purposes of reducing regional haze in the Commonwealth and affected Federal Class I areas. The proposed rulemaking would also provide Statewide consistency because the City of Philadelphia currently requires No. 2 and lighter commercial fuel oil to not exceed a sulfur content limit of 15 ppm.

Implementation of the 500 ppm maximum allowable sulfur content limit for No. 2 and lighter commercial fuel oil beginning July 1, 2016, was expected to achieve reductions of SO₂ emissions of at least 21,000 tons per year (tpy). The Department expects that the Commonwealth would realize an additional 4,000 tpy of SO₂ emission reductions from implementation of the proposed lower maximum allowable sulfur content limit of 15 ppm for No. 2 and lighter commercial fuel oil.

In addition to improving public health and the environment, decreased emissions of SO₂ will also contribute to the attainment or maintenance, or both, of the 2012 annual PM_{2.5} National Ambient Air Quality Standards (NAAQS) within this Commonwealth. On April 7, 2015, the EPA designated the Allegheny, Delaware, and Lebanon County areas as nonattainment with the 2012 annual PM_{2.5} NAAQS. See 80 FR 18535, 18549. The EPA subsequently determined that the Delaware and Lebanon County areas attained that NAAQS. See 81 FR 89868 (December 13, 2016) and 83 FR 9435 (March 6, 2018) respectively. The proposed maintenance plans for these areas have identified lowering the fuel oil standard to 15 ppm as a contingency measure to ensure that these areas will continue to be classified as attainment for the 2012 annual PM_{2.5} NAAQS.

This proposed rulemaking will be submitted to the EPA for approval as a revision to the Commonwealth's SIP following publication of the final-form rulemaking in the *Pennsylvania Bulletin*.

Summary of the Proposed Rulemaking

This proposed rulemaking would amend 25 Pa. Code § 123.22 as follows:

- To lower the maximum allowable sulfur content limit of No. 2 and lighter fuel oil from 500 ppm by weight (0.05% by weight) to 15 ppm by weight (0.0015% by weight).
- To establish a compliance date for implementation of this limit. The proposed compliance date is 60 days after publication of this rulemaking in its final form.

- To amend the store by provision for No. 2 and lighter commercial fuel oil stored on-site by the ultimate consumer to allow compliant fuel stored to be used on and after the compliance date.

Affected Parties

This proposed rulemaking would apply to the owner and operator of a refinery, pipeline, terminal, distributor, carrier, or retail outlet fuel storage facility that produces, conveys, stores, or sells No. 2 and lighter commercial fuel oil, as well as the ultimate consumer that uses No. 2 and lighter commercial fuel oil in the Commonwealth.

Advisory Groups

The Department presented the draft proposed Annex A to the Small Business Compliance Advisory Committee (SBCAC) on January 24, 2018 and the Air Quality Technical Advisory Committee (AQTAC) on February 8, 2018. During the AQTAC meeting, one member asked if the Department could set a compliance date sooner than July 1, 2019 for the proposed rulemaking. The Department explained that the compliance date is dictated by the time needed to proceed through the rulemaking process. The Department has revised the proposed compliance date from July 1, 2019, to 60 days after publication of this rulemaking in its final form, as this rulemaking will not be promulgated by July 1, 2019. Another AQTAC member noted a concern that the sulfur content in the heavier fuel oils remains unchanged. The Department cannot address this concern here because it is beyond the intended purpose of this proposed rulemaking, which is to reduce the maximum allowable sulfur content limit of No. 2 and lighter commercial fuel oil to 15 ppm consistent with the 2017 MANE-VU “Ask.” Both committees voted unanimously to concur with the Department’s recommendation to present this proposed rulemaking to the Board for consideration for publication as a proposed rulemaking.

The Department presented the draft proposed Annex A to the Citizens Advisory Council’s (CAC) Policy and Regulatory Oversight (PRO) Committee on February 9, 2018. On the recommendation of the PRO Committee, on February 20, 2018, the CAC concurred with the Department’s recommendation to present this proposed rulemaking to the Board for consideration.

Public Comments and Board Hearings

The Department recommends a 60-day public comment period and the opportunity for three public hearings at DEP regional offices in Norristown, Harrisburg, and Pittsburgh, Pennsylvania.