

# DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

## DIVISION OF AIR QUALITY

Statutory Authority: 7 Delaware Code, Chapter 60, (7 Del.C. Ch. 60)

7 DE Admin. Code 1108

### FINAL

#### 1108 Sulfur Dioxide Emissions From Fuel Burning Equipment

### ORDER

Secretary's Order No.: 2013-A-0021

Date of Issuance: June 12, 2013

Effective Date of the Amendment: July 11, 2013

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding.

#### Background and Procedural History

This Order considers proposed *revised* regulations to amend 7 DE Admin. Code 1108, Sulfur Dioxide Emissions from Fuel Burning Equipment. The Department's Division of Air Quality commenced the regulatory development process with Start Action Notice 2012-06. The Department published its initial proposed regulation Amendments in the April 1, 2013 *Delaware Register of Regulations*, and held a public hearing on April 24, 2013. It should be noted that public comment was received from both the Delaware Chapter of the Sierra Club and the U.S. Department of Defense by the Department with regard to this proposed promulgation, and the Department provided a very thorough and detailed response to the same.

The proposed *revised* amendments to 7 DE Admin. Code 1108 will reduce the allowable content of sulfur in fuel oils combusted in Delaware, and to effectively reduce the emission of sulfur dioxide (SO<sub>2</sub>) into the atmosphere. These proposed changes will aid in the attainment and maintenance of Delaware's air quality relative to the SO<sub>2</sub> and fine particulate matter (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). The reduction will also reduce acid rain, and will aid in reaching visibility goals of the federal regional haze program. It should be noted that other North-East and Mid-Atlantic states are adopting similar regulations as well.

The Department's presiding hearing officer, Lisa A. Vest, prepared a Hearing Officer's Report dated June 7, 2013 (Report). The Report recommends certain findings and the adoption of the proposed *revised* Amendments as attached to the Report as Appendix A.

#### Findings and Discussion

I find that the proposed *revised* Amendments are well-supported by the record developed by the Department, and I adopt the Report to the extent it is consistent with this Order. The Department's experts developed the record and drafted the proposed Amendments. I find that the Department's experts in the Division of Air Quality fully developed the record to support adoption of these *revised* Amendments. With the adoption of this Order, Delaware will lower sulfur content in residual fuel from 10,000 ppm to 5,000 ppm, in distillate fuel from 3,000 ppm to 15 ppm, and to set up a compliance date of July 1, 2016. DAQ also proposes to add necessary recordkeeping and reporting requirements to ensure compliance of the regulation. The new limits shall apply to all three counties in Delaware.

In conclusion, the following findings and conclusions are entered:

- 1.) The Department has jurisdiction under its statutory authority to issue an Order adopting these proposed Amendments as final;
- 2.) The Department provided adequate public notice of the proposed Amendments, and provided the public with an adequate opportunity to comment on the proposed Amendments, including at the public hearing held on April 24, 2013;
- 3.) The Department held a public hearing on April 24, 2013 in order to consider public comment before making any final decision;
- 4.) The Department's Hearing Officer's Report, including its recommended record and the recommended *revised* Amendments, as set forth in Appendix A, are adopted to provide additional reasons and findings for this Order;

- 5.) The recommended *revised* Amendments should be adopted as final regulation Amendments because Delaware will be able to (1) reduce the allowable content of sulfur in fuel oils combusted in Delaware; (2) effectively reduce the emission of sulfur dioxide (SO<sub>2</sub>) into the atmosphere; (3) the aforementioned reduction will also reduce acid rain, and will aid in reaching visibility goals of the federal regional haze program; and, lastly, because (4) the amendments are well supported by documents in the record;
- 6.) Specifically, the aforementioned proposed *revised* amendments to 7 **DE Admin. Code** 1108 will enable Delaware to do the following: (1) revise the current sulfur content limit in residual fuel from 1% to 0.5%; (2) revise the current sulfur content limit in distillate fuel from the current 0.3% to 15 ppm; (3) for any other fuel, the current sulfur limit of 1% shall be retained; (4) all aforementioned sulfur content limits shall apply to all three counties of Delaware; (5) the compliance date for said sulfur content limits shall be July 1, 2016; (6) revise Section 4.2 to allow using ASTM method D2622, and any alternative method found in 40 CFR 80.580, to provide flexibility; (7) create a detailed certification and recordkeeping section; and (8) provide clarifying language to the existing language contained in 7 **DE Admin. Code** 1108 as so to provide clarity and a better understanding to the general public and the regulated community with regard to this regulation;
- 7.) The Department shall submit this Order approving the final *revised* regulation to the *Delaware Register of Regulations* for publication in its next available issue, and provide such other notice as the law and regulation require and the Department determines is appropriate.

Collin P. O'Mara, Secretary

### 1108 Sulfur Dioxide Emissions from Fuel Burning Equipment

~~12/08/1983~~ 07/11/2013

#### 1.0 General Provisions

- 1.1 The emission of sulfur dioxide (SO<sub>2</sub>) from fuel burning equipment shall be controlled to a limit that shall meet the ambient air quality requirements.
- 1.2 ~~The provisions of this regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of 2.0 of 7 **DE Admin. Code** 1102.~~
- 1.3~~2~~ This regulation shall not apply to fuels used in fluid coking, **[operations or]** fluid catalytic cracking ~~[or]~~ catalyst regeneration **[operations]**.
- 1.4~~3~~ This regulation shall not apply to fuels used by watercraft.

~~05/09/1985~~ 07/11/2013

#### 2.0 Limit on Sulfur Content of Fuel

- 2.1 ~~Except as provided in 2.2 of this regulation~~ Prior to July 1, 2016, no person shall offer for sale, sell, deliver, or purchase any fuel having a sulfur content greater than 1.0% by weight when such fuel is intended for use in any fuel burning equipment in New Castle County. No person shall use any fuel having a sulfur content greater than 1.0% by weight in any fuel burning equipment in New Castle County.
- 2.2 ~~No~~ Prior to July 1, 2016, no person shall offer for sale, sell, deliver or purchase, or use in any fuel burning equipment, distillate fuel oil having a sulfur content greater than 0.3% by weight.
- 2.3 ~~Oil Sampling Method – Oil samples shall be obtained using proper American Society for Testing and Materials (ASTM) methods or alternative methods approved by the Department. On and after July 1, 2016, no person shall offer for sale, sell, deliver, or purchase any fuel having a sulfur content greater than the limits specified in 2.3.1 through 2.3.3 of this regulation, when such fuel is intended for use in any fuel burning equipment in Delaware, and no person shall use any fuel having a sulfur content greater than the limits specified in 2.3.1 through 2.3.3 of this regulation in any fuel burning equipment in Delaware.~~
  - 2.3.1 For a distillate fuel, except as provided for in 2.4 of this regulation, 15 ppm by weight;
  - 2.3.2 For a residual fuel, 0.5% by weight;
  - 2.3.3 For any other fuel, 1.0% by weight.
- 2.4 ~~Sulfur concentrations of residual and distillate fuels shall be determined by the x-ray absorption or the Parr oxygen bomb technique. Transition Period for Distillate Fuel. Fuel having a sulfur content that meets the limit as specified in 2.2 of this regulation but is greater than the limit specified in 2.3.1 of this regulation may be~~

offered for sale, sold, delivered, purchased, and used in Delaware on and after July 1, 2016 only as specified in 2.4.1 and 2.4.2 of this regulation.

2.4.1 Distillate fuel stored within Delaware prior to July 1, 2016 may be offered for sale, sold, purchased, or delivered for use in any fuel burning equipment in Delaware through June 30, 2017, provided records are kept for a period of two (2) years which document and certify the fuel was stored within Delaware prior to July 1, 2016.

2.4.2 Distillate fuel that meets the requirements of 2.4.1 of this regulation that is purchased and received for use on or before June 30, 2017 may be used in any fuel burning equipment in Delaware after June 30, 2017.

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### **3.0 Emission Control in Lieu of Sulfur Content Limits of 2.0 of This Regulation**

The limits on sulfur content established by 2.0 of this regulation shall not apply to any fuel burning equipment employing emission control which limits sulfur dioxide emission to that which would result from burning, without emission control, a fuel permitted by 2.0 of this regulation. Any fuel burning equipment employing emission controls of SO<sub>2</sub>, being covered by a permit issued pursuant to 7 DE Admin. Code 1102, which limits SO<sub>2</sub> emissions to less than that which would result from burning, without emission control, a fuel meeting the corresponding sulfur content limit in 2.0 of this regulation, may use fuel with a sulfur content greater than the corresponding limit in 2.0 of this regulation. In order to employ an emission control rather than sulfur content limits as a means of complying with this Regulation, an owner or operator of fuel burning equipment must demonstrate to the Department in advance that the equivalent emission will be achieved.

07/11/2013

### **4.0 Sampling and Testing Methods and Requirements**

4.1 Oil samples shall be obtained using standard American Society for Testing and Materials (ASTM) methods ASTM D4057-06 "Practice for Manual Sampling of Petroleum and Petroleum Products," or any alternative method approved by the Department and the U.S. Environmental Protection Agency (EPA).

4.2 Sulfur concentrations of residual fuels and distillate fuels shall be determined by the following method:

4.2.1 The standard ASTM method D2622-10 "Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry," or

4.2.2 Any alternative method specified in Title 40, Code of Federal Regulations, Part 80, Section 580 (July 2012 edition), or

4.2.3 Any alternative method approved by the Department and the EPA.

4.3 Any refinery subject to 2.0 of this regulation shall sample and determine the actual sulfur content of each batch of fuel oil they produce that is subject to 2.0 of this regulation, using the sampling and testing methods specified in 4.1 and 4.2 of this regulation.

4.4 Any person subject to 2.0 of this regulation that sells or delivers a batch or shipment of fuel oil that was blended, or came in contact, with any fuel oil or fuel additive that is not established as compliant with the requirements of 2.0 of this regulation based on sampling and testing using the methods specified in 4.1 and 4.2, or based on records received from the transferor pursuant to 5.1 of this regulation, shall sample and determine the actual sulfur content of that batch or shipment using the sampling and testing methods specified in 4.1 and 4.2 of this regulation.

4.5 Any person subject to 2.0 of the regulation that is not covered under 4.3 or 4.4 of this regulation shall, for each batch or shipment of fuel oil they sell or deliver:

4.5.1 Establish the sulfur content based on records they received from the transferor pursuant to 5.1 of this regulation, or

4.5.2 Sample and determine the actual sulfur content using the sampling and testing methods specified in 4.1 and 4.2 of this regulation.

07/11/2013

### **5.0 Recordkeeping and Reporting**

5.1 Three (3) months after this revision of this regulation becomes effective, any person subject to 2.0 of this regulation, when selling or delivering any fuel oil to be used in Delaware (i.e., the transferor), shall provide to the person receiving the fuel oil (i.e., the transferee) an electronic or paper record that contains the following information:

5.1.1 Name, address and telephone number of the transferor.

5.1.2 Name, address and telephone number of the transferee, and the address where the fuel oil is delivered.

- 5.1.3 The volume of fuel being sold or delivered, and the date of sale or delivery.
- 5.1.4 The type of fuel, and the sulfur content of the fuel as a delivered product, determined pursuant to 4.3, 4.4, or 4.5 of this regulation, as applicable, and expressed as one of the following:
  - 5.1.4.1 The actual sulfur content in ppm or percent (%) by weight, or
  - 5.1.4.2 A statement that certifies the sulfur content of the shipment is equal to or below the applicable limit specified in 2.0 of this regulation, or
  - 5.1.4.3 Except for a sale or delivery to an ultimate consumer, a product code or product description that identifies the sulfur content of the shipment as equal to or below the applicable limit specified in 2.0 of this regulation, provided such code or description is standardized throughout the distribution system in which it is used, and each downstream party is given sufficient information to know its full meaning.
- 5.2 Any person subject to 5.1 and 4.3, 4.4, or 4.5 of this regulation shall maintain records, for a minimum period of two (2) years from the date the records were generated, in electronic or paper format, that document the determination or establishment of the actual sulfur content of each batch or shipment of fuel oil.
- 5.3 Any person complying with 5.1.4.3 of this regulation shall maintain records, for a minimum period of two (2) years from the date the records were generated, in electronic or paper format, that document and explain the product code or product descriptions used.
- 5.4 For any transferee subject to requirements of a permit issued pursuant to 7 **DE Admin. Code** 1102, the records established pursuant to 5.1 of this regulation shall be maintained by the transferee for a minimum period of two (2) years from the date the record was generated.
- 5.5 The records as established pursuant to 5.2, 5.3, and 5.4 of this regulation shall be provided to the Department, upon written request by the Department, within thirty (30) days after such request is received.

**12 DE Reg. 347 (09/01/08)**

**17 DE Reg. 79 (07/01/13) (Final)**