

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103**

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SUBJECT: Technical Support Document - Delaware; Regulation No. 1144 – Control of Stationary Generator Emissions
/s/

FROM: Rose Quinto, Environmental Engineer
Air Quality Planning Branch

TO: File
/s/

THRU: Cristina Fernandez, Chief
Air Quality Planning Branch

A. BACKGROUND

On November 1, 2007, the Delaware Department of Natural Resources and Environmental Control (DNREC) submitted a SIP revision that consists of Delaware's regulation for controlling stationary generator emissions (Regulation No. 1144 – Control of Stationary Generator Emissions). Regulation No. 1144 will impact any owner of stationary generator, except the owner of any: mobile generator, residential generator for emergency use only; certain generators whose emissions are already well controlled; or generators with a standby power rating of ten kilowatts or less. The effective date of this regulation is January 11, 2006.

Delaware is not in compliance with the National Ambient Air Quality Standards (NAAQS) for ozone and fine particulate matter (PM_{2.5}). DNREC developed a regulation to control the air emissions from on-site electric generating units such as emergency generators, as well as generators typically known as distributed generation (DG) units. DG is a small, on-site fossil fuel-fired unit, but can encompass a much larger world of electric generation. These fossil fuel-fired generators emit much higher rates of air contaminants per kilowatt hour and contribute to the formation of ground-level ozone and fine particulate matter. The purpose of Regulation No. 1144 is to help ensure that the air emissions from new and existing stationary generators do not cause or contribute to these existing air quality problems.

B. STATE SUBMITTAL

Regulation No.1144 applies to new, existing, emergency, and distributed stationary generators, except for:

1. A generator covered by a permit which imposes a NO_x emission limitation established to

meet Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER);

2. An emergency generator located on a residential property where no commercial or industrial activity is carried on, and operated solely to provide emergency electric power to the domestic residence and structures on that property housing no more than three families;
3. A generator which is mobile;
4. A generator with a standby power rating of 10 kW or less; or
5. Existing, emergency, stationary generators installed at the stations of the member companies of Delaware Volunteer Firemen's Volunteer Association.

Regulation No. 1144 contains provisions to control the emissions of nitrogen oxides (NO_x), nonmethane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from stationary generators in the State of Delaware.

Regulation No. 1144 establishes emission standards in pounds per megawatt-hour (lbs/MWh) of electricity output under full load design conditions or at the total load conditions specified by the applicable testing methods.

Regulation No. 1144 establishes operating requirements of emergency and distributed generators. An emergency generator will operate for unlimited number of hours during an emergency, and during testing or for maintenance purposes before 5 pm on a day which has a Ground Level Ozone Pollution Forecast or Particle Pollution Forecast of "Code Red" or "Code Orange" as announced by DNREC. A distributed generator will operate at any time except as restricted also before 5 pm on a day which has a Ground Level Ozone Pollution Forecast or Particle Pollution Forecast of "Code Red" or "Code Orange" as announced by DNREC. An emergency generator will be tested on any day as required by the National Fire Protection Association (NFPA) or Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards.

Regulation No. 1144 establishes fuel requirements of sulfur content equal to or less than 0.05% by weight of each shipment of diesel fuel or biodiesel blend received for use in a generator on or after April 11, 2006. Fuel requirements of gaseous fuels for waste, landfill, or digester gases, combusted in a generator on or after April 11, 2006 will contain no more than ten grains total sulfur per 100 dry standard cubic feet (170 ppmv total sulfur) on a daily average. An alternative total sulfur limit for waste, landfill, or digester gases shall be allowed based upon a case-by-case determination.

Regulation No. 1144 establishes recordkeeping and reporting requirements and maintaining each record for a minimum of five years after the date the record is made.

Regulation No. 1144 requires stationary generators that operate at times other than during emergencies for testing or for maintenance to meet certain emission standards to reduce their

emissions.

C. EPA EVALUATION:

With the provisions of Regulation No. 1144, the air emissions from new and existing stationary generators in the State of Delaware will not cause or contribute to the existing air quality problems with regard to ground-level ozone and particulate matter, thereby adversely impacting public health, safety and welfare.

D. CONCLUSIONS AND RECOMMENDED AGENCY ACTION:

Regulation No. 1144 adopted by the State of Delaware will result in the control of NO_x, NMHC, PM, SO₂, CO, and CO₂ emissions from stationary generators and will help the State in attaining compliance with the 8-hour ozone NAAQS. EPA approval of the SIP revision is recommended.

