

PWGC Fall Newsletter

Facilities Edition

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Helping You Make Your Facility the Best for the Community and the Environment!

Industrial, Commercial, and Institutional Boilers National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources- 40 CFR Part 63 Subpart JJJJJJ

The boiler MACT and boiler area source final rules were signed by the EPA Administrator on February 21, 2011. A copy of the signed final rules can be downloaded at <http://www.epa.gov/airquality/combustion/>. On May 18, 2011, EPA published a notice delaying the effective date of the major source rule pending the completion of reconsideration or judicial review, whichever is earlier. Updates to the status of the rule will be provided periodically on this site. In July the EPA prepared dockets to assist with major and area sources. A major source is a facility that emits, or has the potential to emit (in the absence of controls), at least 10 tons per year (TPY) of individual hazardous air pollutants (HAP) or 25 TPY of combined HAP. If not a major facility, you will be considered an area source (any source that is not a major source).

The following boilers are not affected by this rule:

-  Any gas-fired boiler
-  Hot water heaters (<120 U.S. gallons, <160 psig, and <210°F (90°C))
-  Waste heat boilers
-  Boilers used as control devices for other NESHAP standards
-  Boilers subject to other NESHAP standards, Section 129 standards, or hazardous waste boilers
-  Research and development boilers

Boilers that burn coal, oil, biomass, or other solid and liquid non-waste materials and located at area source commercial (e.g., laundries, apartments, hotels), institutional (e.g., schools, churches, medical centers, municipal buildings), or industrial (e.g., manufacturing, refining, processing, mining) facilities are subject to this rule, see below.

AREA SOURCES: New and Existing Small boilers less 10 MMBtu/hr that operate on coal, biomass or oil must perform a tune-up every other year. Existing boilers which are considered to have commenced construction or reconstruction of the boiler on or before June 4, 2010 and are greater than 10 mmBtu/hr and operate on oil or biomass must be perform a one-time energy assessment and a tune up every other year. If operating on coal emission limits for mercury (Hg) and carbon monoxide (CO) a one-time energy assessment performed. New boilers are considered to have commenced construction/ reconstruction or switched from natural gas fuel to solid fossil fuel, biomass or liquid fuel after June 4, 2010 and are greater than 10 mmBtu/hr. If these boilers operate on coal they must meet emission limits for Hg, CO and particulates (PM). If operating on biomass of oil emission limits must be met for PM and a tune up every year performed.

MAJOR SOURCES: Existing large boilers greater than 10mmBTU/hr and operate on clean (*natural gas, refinery gas, or process gas as clean as natural gas*) must performed an annual tune-up and a one-time energy assessment. If burning coal, oil or biomass emission limits for Hg, dioxin, PM hydrogen chloride (HCl), and CO must be met, a one-time energy assessment. If the boiler is limited use only a tune up every other year and one time energy assessment is required. New large boilers (greater than 10mmBTU/hr and operating on clean gas must perform an annual tune-up. If operating on coal, oil or biomass emission limits for Hg, dioxin, PM, HCl, and CO must be met.

Contact PWGC for further assistance.



STRATEGIC ENVIRONMENTAL SOLUTIONS

Happy Fall! PWGC's hospital newsletters are designed to assist Facilities Engineering and other departments within the hospitals to stay updated on ever changing environmental rules, regulations, and other pertinent issues related to the healthcare industry.

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PWGC 
Strategic Environmental Engineering Solutions

LED Lighting

LED lighting is the newest technology in energy efficient lighting systems, but how can a light source that produces the same lumens per watt as fluorescent, or HID lamps be so efficient? Fluorescent lamps are typically used indoors, and HID lamps (high pressure sodium and metal halide) typically used for roadway and parking lot lighting are omnidirectional light sources – that is they provide light all around the lamp. LED light sources are directional, and therefore their light output (measured in lumens) can be better focused at the area to be lit. Because LEDs are directional, fixtures using LEDs as light sources can be up to twice as efficient as fluorescent fixtures and five to six times as efficient as HID fixtures.

In addition to being more efficient light sources, LEDs also provide better light sources in terms of the visible light they provide. LEDs have a color rendering index (CRI) that is close to natural daylight and therefore we can perceive colors under LEDs as we would outdoors on a sunny day. LEDs have a higher CRI than metal halide lamps and a much higher CRI than high pressure sodium or fluorescent lamps. In terms of maintenance, LEDs are rated for 50,000 hours (5.7 years) of operation – about one and a half times longer than fluorescent lamps and two to eight times longer than HID lamps.

To maximize the benefits of LEDs as light sources when preparing for a new lighting project or fixture replacement project be aware that not all LED fixtures are equal! LED fixtures are only as good as their driver (the power supply that provides the correct power to the LED) and the fixture's ability to dissipate the heat generated by the driver.

PWGC now offers full lighting design services including fixture selection, layout / photometrics, and electrical engineering services. Please feel free to contact us regarding any upcoming project or to find out about any available rebates for energy efficient lighting upgrades.

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Reminder- Electronics Contain Hazardous Substances



Electronic equipment used in health care facilities more often than not contain hazardous substances such as lead in cathode ray tube (CRT) monitors and, mercury in LCD displays.

Improper disposal of electronic equipment poses a significant threat to public health and the environment. Electronic equipment that gets land filled or incinerated can release heavy metals into the atmosphere and contaminate groundwater.

Purchasing departments have great power as the greening process begins with purchasing. It is encouraged when purchasing computers to use EPEAT, which stands for Electronic Product Environmental Assessment Tool. This is an easy-to-use, on-line tool helping institutional purchasers select and compare computer desktops, laptops and monitors based on their environmental attributes. EPEAT was developed using a grant by EPA and is managed by the Green Electronics Council (GEC). The website is <http://www.epeat.net/>. This website provides a registry of greener electronic products. EPEAT rates products on a TIER system (bronze, silver and gold). Performance categories include environmentally sensitive materials, material selection, energy conservation, design for end of life, packaging, end of life management and corporate performance.


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