



Toxic material source reduction - reduced mercury in light bulbs

MRp2 | Required

Intent

Establish and maintain a toxic material source reduction program to reduce the amount of mercury brought into buildings through purchases of light bulbs.

Requirements

- Maintain mercury content of all mercury-containing light bulbs below 100 picograms per lumen hour, on weighted average, for all mercury-containing light bulbs acquired for the existing building and associated grounds.
- The weighted average mercury content of these mercury-containing light bulbs is calculated by: 1) adding up the total weight of mercury in all the mercury-containing light bulbs acquired during the performance period (picograms of Hg); and then, 2) dividing total mercury content (picograms of Hg) by the sum of the lumen hour output of all the light bulbs (lumen hours: calculated by multiplying the rated hours (life) of each light bulb by the mean light output in lumens).
 - Rated hours of life are defined as stated by the manufacturer based on consistent testing (three hours on/20 minutes off for linear fluorescents and compact fluorescents; 11 hours on for HID light bulbs) and are based on the design or mean light output of the light bulbs (in lumens, fluorescent light bulbs measured with a ballast having a ballast factor of 1.0 and measured using instant-start ballasts except for T-5s, which are measured using program start ballasts).
 - The mean light output in lumens is the light output at 40% of light bulb life.
 - These calculations need to show for all acquired mercury containing light bulbs:
 - The total mercury content in the light bulbs.
 - The total lumen hours of light output for all the light bulbs.
 - The number of light bulbs of each type.
 - The overall weighted average mercury content in picograms/lumen hour.
- If the mercury content documentation shows a range of mercury contents in milligrams, use the highest value in the range in these calculations.