CHAPTER 1 - MATERIALS AND RESOURCES

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701.05 OZONE DEPLETION POTENTIAL (ODP) MATERIAL MANAGEMENT

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INTENT

Protection of ozone by restricting ozone depleting refrigerants and substances.

REQUIREMENT

For all new buildings:

A. Installations of heating, ventilation, and air conditioning (HVAC) and refrigeration equipment must contain refrigerants with zero ozone depletion potential (ODP) or with global warming potential (GWP) less than 100, unless the equipment contains less than 0.23 kg of refrigerant.

B. Fire suppression systems must not contain any ozone depleting substances (Chlorofluorocarbons [CFCs], Hydrochlorofluorocarbons [HCFCs] or Halons).

For existing equipment:

A. CFC and halon-based materials are not to be used for any purposes.

B. From 1 January 2030, HCFC based materials or any other material having any ODP are not to be used for any purposes.

C. The venting or direct discharging of any refrigerants during equipment maintenance is strictly prohibited.

D. Recovery, reclamation, recycling and reuse of refrigerants must be practiced at all times.

SIGNIFICANCE

Ozone layer in the stratosphere absorbs UV radiation from the sun, thereby preventing it from reaching the planet's surface. UV radiation is linked to several harmful effects, including skin cancers, cataracts and damage to crops and marine life. Reduced ozone levels because of ozone depletion mean less protection from the sun's rays and more exposure to UV radiation at the earth's surface.

Certain compounds release chlorine or bromine when they are exposed to intense UV light in the stratosphere. These compounds contribute to ozone depletion and are called ozone depleting substances (ODS). ODS that release chlorine include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), carbon tetrachloride and methyl chloroform. ODS that release bromine include halons and methyl bromide, which are generally used as fire extinguishing agents. Bromine is known to be more potent in destroying stratospheric ozone levels than chlorine. Certain ozone depleting substances also have a significant Global Warming Potential (GWP) which contributes to climate change.