

**Chapter 173-480 WAC**  
**AMBIENT AIR QUALITY STANDARDS AND EMISSION LIMITS FOR RADIONUCLIDES**

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**WAC**

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**WAC 173-480-010 Purpose.** The purpose of this chapter is to define maximum allowable levels for radionuclides in the ambient air and control emissions from specific sources.

[Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-010, filed 5/7/86.]

**WAC 173-480-020 Applicability.** (1) The ambient air standards shall apply to the entire state. Measurements may be made at all points up to property lines of point, area and fugitive emission sources.

(2) The emission limits of this chapter shall apply to all radionuclide emission units.

[Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-020, filed 5/7/86.]

**WAC 173-480-030 Definitions.** Unless a different meaning is clearly required by context words and phrases used in this chapter shall have the following meanings: General terms common with other chapters as defined in chapter 173-400 WAC, and terms specific to the standards and limits of radionuclides as defined in this section.

(1) "ALARA" means as low as reasonably achievable making every reasonable effort to maintain exposures to radiation as far below the dose standards in this chapter as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other socioeconomic considerations, and in relation to the utilization of nuclear energy, ionizing radiation, and radioactive materials in the public interest.

(2) "As low as reasonably achievable control technology" (ALARACT) means the use of radionuclide emission control technology that achieves emission levels that are consistent with the philosophy of ALARA.

(3) Best available radionuclide control technology "BARCT" means technology which will result in a radionuclide emission limitation based on the maximum degree of reduction for radionuclides which would be emitted from any proposed new or modified emission units which the permitting authority on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such emission unit or modification through applica-

tion of production processes or available methods, systems, and techniques. In no event shall application of best available radionuclide technology result in emissions of radionuclides which would exceed the ambient annual standard limitation specified in this chapter.

(4) "Effective dose equivalent" means the sum of the products of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body of reference man.

(5) "Radionuclide" means any nuclide that emits radiation.

(6) "Rem" means a unit of dose equivalent radiation.

[Statutory Authority: RCW 70.94.331 and 70.94.422. WSR 07-12-003 (Order 06-15), § 173-480-030, filed 5/23/07, effective 6/23/07. Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-030, filed 5/7/86.]

**WAC 173-480-040 Ambient standard.** Emissions of radionuclides in the air shall not cause a maximum effective dose equivalent of more than 10 mrem/y to the whole body to any member of the public. Compliance with the standard shall be determined by procedures in WAC 173-480-070.

[Statutory Authority: RCW 70.94.331 and 70.94.422. WSR 07-12-003 (Order 06-15), § 173-480-040, filed 5/23/07, effective 6/23/07. Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-040, filed 5/7/86.]

**WAC 173-480-050 General standards for maximum permissible emissions.** (1) All radionuclide emission units are required to meet the emission standards in this chapter. At a minimum all emission units shall meet chapter 246-247 or 246-248 WAC (as applicable) requiring every reasonable effort to maintain radioactive materials in effluents to unrestricted areas, as low as reasonably achievable (ALARA). For the purposes of this chapter, control equipment of facilities operating under ALARA shall be defined as reasonably achievable control technology (RACT).

(2) Whenever another federal or state regulation or limitation in effect controls the emission of radionuclides to the ambient air, the more stringent control of emissions shall govern.

[Statutory Authority: RCW 70.94.331 and 70.94.422. WSR 07-12-003 (Order 06-15), § 173-480-050, filed 5/23/07, effective 6/23/07. Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-050, filed 5/7/86.]

**WAC 173-480-060 Emission standards for new and modified emission units.** (1) Whenever the construction, installation or establishment of a new emission unit subject to this chapter is contemplated, the project shall utilize best available radionuclide control technology (BARCT).

(2) Addition to, enlargement, modification, replacement, alteration of any process or emission unit or replacement of air pollution control equipment which will significantly change potential radionuclide emissions or significantly change the dose equivalent will re-

quire the proposed project to utilize best available radionuclide control technology (BARCT) for emission control.

[Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-060, filed 5/7/86.]

**WAC 173-480-070 Emission monitoring and compliance procedures.**

(1) The procedures specified in chapter 246-247 or 246-248 WAC (as applicable) shall be used to determine compliance with the standard. Radionuclide emissions shall be determined and dose equivalents to members of the public shall be calculated using department of health approved sampling procedures, department of health approved models, or other procedures, including those based on environmental measurements that department of health has determined to be suitable.

(2) Compliance with this standard shall be determined by calculating the dose to members of the public at the point of maximum annual air concentration in an unrestricted area where any member of the public may be.

[Statutory Authority: RCW 70.94.331 and 70.94.422. WSR 07-12-003 (Order 06-15), § 173-480-070, filed 5/23/07, effective 6/23/07. Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-070, filed 5/7/86.]

**WAC 173-480-080 Regulatory actions and penalties.** (1) The department or any activated local air pollution control authority may enforce this chapter with the provisions of WAC 173-400-230, Regulatory actions; and 173-400-240, Criminal penalties.

(2) The responsible person may also be subject to the provisions of RCW 34.05.350, Emergency rules and amendments; RCW 70.98.130, Administrative procedure; RCW 70.98.140, Injunction proceedings; and RCW 70.98.200, Penalties as cited by the department of health.

[Statutory Authority: RCW 70.94.331 and 70.94.422. WSR 07-12-003 (Order 06-15), § 173-480-080, filed 5/23/07, effective 6/23/07. Statutory Authority: RCW 70.94.331. WSR 86-10-053 (Order 86-04), § 173-480-080, filed 5/7/86.]