12.1 What is the purpose of the Radon Testing and Mitigation Program? The purpose of the Radon Testing and Mitigation Program is to limit the exposure of Service employees to unsafe levels of radon gas.

12.2 What are the objectives of the program?
A. Testing and measurement of airborne radon gas within occupied facilities and in Service non-public water sources.
B. Radon testing and mitigation in Service-leased and General Services Administration-owned or -leased buildings by owner/lessor.
C. Followup testing, inspection, and mitigation activities for occupied Service facilities with airborne radon levels exceeding recommended limits.

12.3 What are the authorities for the program?
A. Public Law 100-551, Indoor Radon Abatement, Section 309, Study Requirement in Federal Buildings.
B. 485 DM 27.

12.4 Who is responsible for the program?
A. The Chief, Division of Engineering will:
(1) Issue guidance to the Regional Engineers/Compliance Coordinators
(2) Provide technical support to ensure compliance with applicable environmental laws and regulations for radon testing and mitigation
B. Regional Directors will ensure the effective implementation of the radon testing, inspection, and mitigation activities, as required, in their Region.
C. The Regional Engineers/Compliance Coordinators, as delegated by the Regional Director, will:
(1) Develop and manage Regional radon programs.
(2) Provide technical assistance to the project leaders for radon testing and mitigation efforts.
(3) Coordinate with the General Services Administration for testing and mitigation in buildings owned by or administered by the GSA.
(4) Conduct inspections and arrange for qualified personnel to inspect Service buildings and non-public water sources for radon gas.
(5) Compile Regional information on radon inspections and maintain records of mitigation efforts.
(6) Tract results of buildings that have been tested and schedule those in need of testing.

12.5 What are the definitions for some terms used in this chapter?
A. Picocurie per liter (pCi/L). A unit of radioactivity corresponding to an average of one decay every 27 seconds in a volume of one liter of air.
B. Radon. An inert, colorless, odorless, naturally occurring, radioactive gas that is formed by radioactive decay of radium (Ra) atoms.

12.6 What are the components of the program? Each Region will develop and implement a radon testing and mitigation program for the facilities under its control. The program will contain, as a minimum, the following elements.
A. Testing. All occupied Service-owned or leased buildings will be tested for radon.
(1) Buildings tested previous to the issuance of this policy and found to have radon levels less than 4 picocuries per liter of air meet the requirements of this section and require no further action.
(2) Environmental Protection Agency approved contractors or qualified local, State, or Federal health services personnel may perform testing and analysis.
(3) Test buildings in the following priority:
(a) Residences and dormitories.
(b) Hatcheries (supplied by subsurface water sources with full enclosed structures).
(c) Buildings occupied on a 24-hour basis.
(d) Buildings occupied, but less than 24 hours per day.
(e) Buildings occupied intermittently.
(4) Test all Service-owned non-public subsurface water sources at the point of entry into the structure. Public water sources are regulated by the Safe Drinking Water Act. See 561 FW 4.
402-R-92-004, Indoor Radon and Radon Decay Product Measurement Protocols, both of which are available from Engineering or EPA Regional Offices.

(1) For initial monitoring (screening), a track-etch type (alpha Track) monitor or its equivalent is recommended. Other types of detectors may be used if they are on the EPA (or State) list of acceptable devices.

(2) Short-term measurements lasting 90 days or less should be made under closed-building conditions. This is likely to be during the heating season in northern climes, and during the air-conditioning season.

(3) Screening tests will be conducted on the lowest occupiable level and on the first above-ground floor level.

(4) Test nonpublic subsurface water sources for radon and implement mitigation when the concentration of radon in water is equal to or greater than the current EPA suggested level of 300 pCi/L.

C. Mitigation. When airborne radon levels exceed currently recommended limits, mitigation is required. We recommend mitigation according to the following schedule:

(1) Above 200pCi/L - retest immediately. Start mitigation activities within 1 month. We recommend temporary removal of the employees from the work space/occupants from residences.

(2) Between 20 pCi/L and 200 pCi/L - retest immediately. Begin mitigation activities within 6 months. Consider temporary removal of employees when levels are at the higher end of the range.

(3) Between 4 pCi/L and 20 pCi/L - retest within 6 months. Requires long-term (1-year) measurements to determine realistic levels of radon. Begin mitigation within 1 year based on the testing and analysis.

(4) Less than 4pCi/L - no further action is necessary.

D. Mitigation Techniques. Information on mitigation techniques can be found in the following publications:


(4) Removing Radon from Water: Using Aeration and Glandular Activated Carbon, University of Maine Water Resources Program.

E. Post-Mitigation Monitoring. After installation of a radon system, measurement of radon gas should be made over a minimum period of 3 months, preferably during the winter. Secondary, longer term measurements, usually over 12 months, will provide a more definitive picture of radon exposure reduction.

F. Medical Surveillance. Medical surveillance of employees exposed to radon gas and radon progeny in buildings is not normally recommended. Direct specific questions concerning the appropriateness, content, and frequency of any indicated medical surveillance as it relates to radon to the Division of Safety, Health, and Aviation.