

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 192****[A-FRL 2211-8b]****Standards for Remedial Actions at Inactive Uranium Processing Sites, Advance Notice of Proposed Rulemaking****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Advance Notice of Proposed Rulemaking.

SUMMARY: EPA has issued final remedial action standards (40 CFR Part 192, Subpart A) for the control of tailings piles at inactive uranium processing sites. This notice announces that the Agency will consider whether different standards than 40 CFR Part 192, Subpart A would be more appropriate for control of tailings piles at those designated sites that have been established as having "medium" or "low" priority for carrying out remedial actions. Specifically, since most of these sites have much lower population densities than the "high" priority sites, 1) should the standards be less restrictive at such sites, and/or 2) should the standards place primary reliance on control of access (such as through fences) rather than physical control of tailings (such as by thick earthen covers) to avoid radiation exposure, so as to reduce the costs of disposal of tailings at these sites?

DATE: Comments are due by May 5, 1983.

ADDRESS: Comments on the issue described in this notice should be submitted to Docket No. A-79-25, which is located at the Environmental Protection Agency, Central Docket Section (A-130), West Tower Lobby, 401 M Street, S.W., Washington, D.C. 20460. Docket A-79-25 contains the rulemaking records. The Docket is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Dr. Stanley Lichtman, Guides and Criteria Branch (ANR-460), Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, D.C. 20460; telephone 703-557-8927.

SUPPLEMENTARY INFORMATION:**Background**

On November 8, 1978, Congress enacted the Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. 95-604 (henceforth designated "the Act"). In the Act, Congress stated its

finding that uranium mill tailings ". . . may pose a potential and significant radiation health hazard to the public, . . . and . . . that every reasonable effort should be made to provide for stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards from such tailings." The Administrator of the Environmental Protection Agency was directed to set ". . . standards of general application for the protection of the public health, safety, and the environment . . ." to govern this process of stabilization, disposal, and control.

The Act directs the Department of Energy (DOE) to conduct necessary remedial actions at designated inactive uranium processing sites to achieve compliance with the general standards established by EPA. Standards are required for two types of remedial actions: control and cleanup. Control is the operation which places the tailings piles in a condition that will minimize the risk to man for a long time. Cleanup is the operation which reduces the potential health consequences of tailings that have been dispersed from tailings piles by natural forces or removed by man and used elsewhere in buildings or land.

In another part of this issue we have promulgated such standards (40 CFR Part 192), Subparts A and B of the standards cover control and cleanup, respectively; Subpart C addresses implementation of Subparts A and B. This notice concerns only Subpart A, the standards for control of tailings piles.

DOE has designated 24 inactive mill sites for remedial actions under the Act (44 FR 74892, December 18, 1979). Furthermore, as required by Section 102(b) of the Act, DOE has established priorities for carrying out remedial actions at each site (44 FR 74892), relying primarily on advice from EPA. EPA recommended that the primary basis for establishing priorities for carrying out remedial action should be the estimated near-term local rates of induction of health effects associated with radon emissions from the piles. Accordingly, DOE established 9 sites as having "high" priority, 6 as having "medium" priority, and 9 as having "low" priority for carrying out remedial actions. However, in advising DOE on a logical order for carrying out remedial actions, EPA noted that it was not addressing the need for nor the goals of such actions (see docket item IV-E-2).

EPA's goals for control of these tailings piles were described in the supporting documents (see below) for

the final standards as: isolation and stabilization against misuse by people and dispersal by natural forces; reduction of risk to nearby individuals and of the collective risk to populations from radon emitted by the piles; elimination of any significant exposure to gamma radiation from piles; and protection of ground and surface water quality. The longevity of control to achieve these goals was a major concern in setting the standards.

Issues for Public Comment

During the review of the standards by certain Federal agencies required by Section 206(a) of the Act and Executive Order 12291 (46 FR 13193-8, February 19, 1981), questions were raised regarding the appropriateness of the control standards for general application to all 24 inactive sites. Noting that the regions around "low" priority sites are generally sparsely populated, some reviewers suggested that less restrictive standards might be appropriate for sites in the lower priority categories than for those having "high" priority for carrying out remedial actions. In view of this concern at Federal agencies that have reviewed the final standards, EPA is requesting public comments on this issue.

Some of these Federal reviewers suggested, in addition, that a radon limit applied at the boundary ("fenceline") of the government-owned property around a tailings pile would be an appropriate form of standards for the lower priority sites. Such a standard could be satisfied largely by institutional methods, i.e., by acquiring and maintaining control over land. The standard of Subpart A, however, can be satisfied only by generally more costly physical methods (such as applying thick earthen covers) that control the tailings and their emissions, with minimal reliance on institutional methods. EPA also requests comments on the adequacy of such a radon "fenceline" standard to meet the objectives of the Act.

Comments on both issues are requested to assist the Agency in its decision whether the standards should be revised for the lower priority sites. Revision of the standards is authorized by Section 275a of the Atomic Energy Act, as added by Pub. L. 95-604. Persons interested in commenting on these issues may wish to examine the rulemaking record (see "ADDRESS," above), or review site-specific information. Of special interest are the Preamble to the final standards published today, and the Final Environmental Impact Statement (EPA Report 520/4-82-013-1; instructions for obtaining this report are given in the

Preamble). Individual "Engineering Assessment" reports have been prepared for DOE for the 24 designated sites. Ordering instructions may be obtained from the U.S. Department of Energy, Albuquerque Operations Office, Uranium Mill Tailings Remedial Action Project Office, Albuquerque, New Mexico 87108; telephone number 505-844-1014.

List of Subjects in 40 CFR Part 192

Environmental protection, Radiation protection, Uranium.

Dated: December 27, 1982.

John W. Hernandez, Jr.,

Acting Administrator.

[FR Doc. 82-35598 Filed 12-30-82; 11:00 am]

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**ENVIRONMENTAL PROTECTION
AGENCY**
40 CFR Part 192
[FRL 1469-8]
**Interim Cleanup Standards for Inactive
Uranium Processing Sites**
AGENCY: Environmental Protection
Agency.

ACTION: Interim standards.

SUMMARY: The Environmental Protection Agency (EPA) is issuing interim standards for cleanup of open lands and buildings contaminated with residual radioactive materials (mainly tailings) from inactive uranium processing sites. These standards are also being published simultaneously as proposed standards upon which public comment is being solicited. (See Proposed Cleanup Standards in the Proposed Rules section of the Federal Register.)

EPA has developed these standards pursuant to Section 275(a) of the Atomic Energy Act, as added by Section 208(a) of Pub. L. 95-604, the Uranium Mill Tailings Radiation Control Act of 1978. Pub. L. 95-604 requires the Department of Energy (DOE) to conduct remedial actions for designated inactive uranium processing sites in accordance with standards promulgated by EPA. Buildings and land contaminated with tailings pose a continuing threat to public health. Some of these buildings have been found to have radiation levels which are highly dangerous to anyone exposed to them for long times. Pub. L. 95-604 precludes undertaking remedial action before EPA has promulgated standards. Therefore, we have decided to promulgate interim standards for cleanup of these open lands and buildings, to permit DOE to take remedial actions under Pub. L. 95-604 to alleviate these problems.

DATES: Effective date: April 22, 1980.
Comment date: Comments should be received on or before June 23, 1980.

ADDRESS: Comments should be submitted to Docket No. A-79-25, which is located in the Environmental Protection Agency, Central Docket Section, Room 2903B, 401 M Street, SW., Washington, D.C. 20460. The Draft Environmental Impact Statement may be examined at the Central Docket Section. Shortly after we propose disposal standards for inactive processing sites, single copies of the Draft Environmental Impact Statement may be obtained by writing to the address given below.

FOR FURTHER INFORMATION CONTACT:
Dr. Stanley Lichtman, Criteria and

Standards Division (ANR-460), Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, D.C. 20460; telephone number 703-557-8927

SUPPLEMENTARY INFORMATION: Pursuant to Section 275(a) of the Atomic Energy Act, as added by Section 208(a) of Pub. L. 95-604, the Uranium Mill Tailings Radiation Control Act of 1978, EPA has developed standards for the cleanup of open lands and buildings contaminated with uranium mill tailings from inactive processing sites. Pub. L. 95-604 requires the Department of Energy to conduct remedial actions for designated inactive uranium processing sites in accordance with standards promulgated by EPA. (Section 108(a)(1), 42 U.S.C. Section 7915(a)(1)). However, Pub. L. 95-604 precludes undertaking remedial actions before such standards are promulgated.

Lands and buildings contaminated with uranium mill tailings pose risks to public health. The greatest hazard from tailings on open lands is increased levels of radon decay products in buildings. When radon decay products are inhaled, they increase the chance of lung cancer. Exposure to direct gamma radiation and contamination of drinking water and food may also occur.

Tailings usually only pose significant risk to people who are exposed for a long time. However, some homes and other buildings have been found in which the radon decay product concentration is quite dangerous. There are such buildings, for example, in Salt Lake City, and in Canonsburg, Pennsylvania. Several buildings in Salt Lake City are immediately adjacent to a tailings pile, or have tailings in, under, or around them. In some of these, indoor radon decay product concentrations exceed the average occupational concentration limit for uranium miners (0.3 WL).¹ Included among these is a fire station in Salt Lake City, where substantially elevated levels have been measured even when mechanical ventilation is used. In Canonsburg, an industrial park is now located on an inactive processing site. Eight buildings leased to commercial tenants are located directly over heavily contaminated land. Measurements during working hours show that all buildings have substantially elevated indoor radon decay product concentrations, with the highest average daytime level being 0.4 WL. These levels

¹ A working level (WL) is any combination of short-lived radon decay products in one liter of air that will result in the ultimate emission of alpha rays with a total energy of 130 billion electron volts. The working level expresses a concentration of radioactivity in the air, not how much radiation a person receives.

are dangerous and will continue. To allow DOE to begin remedial action under Pub. L. 95-604 to alleviate these hazards, we have decided to promulgate these immediately effective interim cleanup standards.

Studies of indoor background radioactivity in Grand Junction (Colorado), New York State, and New Jersey show that at least 10 percent of houses with basements exceed the interim standard's remedial action level of 0.015 WL. Because of this, we believe it would often be impossible to try to reduce levels for houses affected by tailings significantly below 0.015 WL by removing the tailings. Thus, it is unlikely that the final standards will be set at a level significantly more stringent than the interim action level of 0.015 WL, and remedial actions performed under the interim standard will not have to be redone. Furthermore, although we have not formally solicited public comments on the interim standards, the Nuclear Regulatory Commission and the Department of Energy have been consulted. For these reasons, we believe issuing immediately effective interim cleanup standards is justified.

A statement of the research, analysis, and other available information in support of this interim standard is contained in the preamble to the proposed standards published elsewhere in the Federal Register today. Additional background material may be found in the Draft Environmental Impact Statement being made available in Docket No. A-79-25, which is located at the address given above, and in other information contained in that docket. We invite written comments on these interim standards, and they remain subject to modification in response to such comments and to views expressed orally at public hearings (see below).

In addition to the procedures we followed prior to promulgating these interim cleanup standards, we are conducting the required public review process for promulgating final standards. In the Proposed Rules section of today's Federal Register, we are proposing for comment the cleanup standards for inactive uranium processing sites. They are identical to the interim cleanup standards which are being made effective immediately. Furthermore, EPA intends to hold public hearings on these proposed cleanup standards and on proposed standards for the disposal of tailings from inactive sites. The disposal standards will be proposed for public comment soon, and the Draft Environmental Impact Statement for both proposed standards will be made generally available at that

time. Therefore, before these proposed cleanup and disposal standards become final, members of the public will have the opportunity to comment in writing, and to present data, views, and arguments at a public hearing.

Note.—The costs and benefits of these standards are discussed in the Draft Environmental Impact Statement. However, neither our issuance of interim cleanup standards nor the remainder of our program to set remedial action standards for Pub. L. 95-604 require preparation of an economic analysis under Executive Order 12044. We expect the costs of the remedial action program in any calendar year to be less than the \$100 million criterion EPA has established (44 FR 30988-30998, May 29, 1979) for requiring an economic analysis.

Dated: April 14, 1980.

Douglas M. Costle,
Administrator.

Part 192 is added to Title 40 of the Code of Federal Regulations as follows:

PART 192—ENVIRONMENTAL PROTECTION STANDARDS FOR URANIUM MILL TAILINGS

Subpart A—[Reserved]

Subpart B—Environmental Standards for Cleanup of Open Lands and Buildings Contaminated with Residual Radioactive Materials From Inactive Uranium Processing Sites

Sec.	
192.10	Applicability.
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Subpart C—Exceptions

192.20	Criteria for exceptions.
192.21	Remedial actions for exceptional circumstances.

Table A [Reserved]

Table B.

Authority: Sec. 275, Atomic Energy Act of 1954, (42 U.S.C. 2022), as amended by the Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. 95-604.

Subpart A—[Reserved]

Subpart B—Environmental Standards for Cleanup of Open Lands and Buildings Contaminated with Residual Radioactive Materials From Inactive Uranium Processing Sites

§ 192.10 Applicability.

This subpart applies to open lands and buildings which are part of any processing site designated by the Secretary of Energy under Pub. L. 95-604, Section 102. Section 101 of Pub. L. 95-604, states that "processing site" means—

(a) Any site, including the mill, containing residual radioactive materials at which all or substantially all of the uranium was produced for sale

to any Federal agency prior to January 1, 1971 under a contract with any Federal agency, except in the case of a site at or near Slick Rock, Colorado, unless—

(1) Such site was owned or controlled as of January 1, 1978, or is thereafter owned or controlled, by any Federal agency, or

(2) A license (issued by the [Nuclear Regulatory] Commission or its predecessor agency under the Atomic Energy Act of 1954 or by a State as permitted under section 274 of such Act) for the production at such site of any uranium or thorium product derived from ores is in effect on January 1, 1978, or is issued or renewed after such date; and

(b) Any other real property or improvement thereon which—

(1) Is in the vicinity of such site, and

(2) Is determined by the Secretary, in consultation with the Commission, to be contaminated with residual radioactive materials derived from such site.

Any ownership or control of an area by a Federal agency which is acquired pursuant to a cooperative agreement under this title shall not be treated as ownership or control by such agency for purposes of paragraph (a)(1) of this section. A license for the production of any uranium product from residual radioactive materials shall not be treated as a license for production from ores within the meaning of paragraph (a)(2) of this section if such production is in accordance with section 108(b).

§ 192.11 Definitions.

(a) Unless otherwise indicated in this subpart, all terms shall have the same meaning as defined in Title I of the Uranium Mill Tailings Radiation Control Act of 1978.

(b) *Remedial action* means any action performed under Section 108 of the Uranium Mill Tailings Radiation Control Act of 1978.

(c) *Open land* means any surface or subsurface land which is not a disposal site and is not covered by a building.

(d) *Working Level (WL)* means any combination of short-lived radon decay products in one liter of air that will result in the ultimate emission of alpha particles with a total energy of 130 billion electron volts.

(e) *Dose equivalent* means absorbed dose multiplied by appropriate factors to account for differences in biological effectiveness due to the type and energy of the radiation and other factors. The unit of dose equivalent is the "rem."

(f) *Curie (Ci)* means the amount of radioactive material which produces 37 billion nuclear transformations per second. One picocurie (pCi) = 10^{-12} Ci.

§ 192.12 Standards.

Remedial actions shall be conducted so as to provide reasonable assurance that—

(a) The average concentration of radium-226 attributable to residual radioactive material from any designated processing site in any 5 cm thickness of soils or other materials on open land within 1 foot of the surface, or in any 15 cm thickness below 1 foot, shall not exceed 5 pCi/gm.

(b) The levels of radioactivity in any occupied or occupiable building shall not exceed either of the values specified in Table B because of residual radioactive materials from any designated processing site.

(c) The cumulative lifetime radiation dose equivalent to any organ of the body of a maximally exposed individual resulting from the presence of residual radioactive materials or byproduct materials shall not exceed the maximum dose equivalent which could occur from radium-226 and its decay products under paragraphs (a) and (b) of this section.

§ 192.13 Effective date.

The standards of this subpart shall be effective April 22, 1980.

Subpart C—Exceptions

§ 192.20 Criteria for exceptions.

Exceptions to the standards may be justifiable under any of the following circumstances:

(a) Public health or safety would be unavoidably endangered in attempting to meet one or more of the requirements of Subpart A or Subpart B of this part.

(b) The goal of environmental protection would be better served by not satisfying cleanup requirements for open land, § 192.12(a) or the corresponding part of § 192.12(c). To justify an exception to these requirements there should be a clearly unfavorable imbalance between the environmental harm and the environmental and health benefits which would result from implementing the standard. The likelihood and extent of current and future human presence at the site may be considered in evaluating these benefits.

(c) The estimated costs of remedial actions to comply with the cleanup requirements for buildings, § 192.12(b) or the corresponding part of § 192.12(c), are unreasonably high relative to the benefits. Factors which may be considered in this judgment include the period of occupancy, the radiation levels in the most frequently occupied areas, and the residual useful lifetime of the building. This criterion can only be used

when the values in Table B are only slightly exceeded.

(d) There is no known remedial action to meet one or more of the requirements of Subpart A or Subpart B of this part. Destruction and condemnation of buildings are not considered remedial actions for this purpose.

§ 192.21 Remedial actions for exceptional circumstances.

Section 108 of Pub. L. 95-604 requires the Secretary of Energy to select and perform remedial actions with the concurrence of the Nuclear Regulatory Commission and the full participation of any State which pays part of the cost, and in consultation, as appropriate, with affected Indian tribes and the Secretary of the Interior. Under exceptional circumstances satisfying one or more of the conditions 192.20 (a), (b), (c), and (d), the Department of Energy may select and perform remedial actions, according to the procedures of Sec. 108, which come as close to meeting the standard to which the exception applies as is reasonable under the exceptional circumstances. In doing so, the Department of Energy shall inform any private owners and occupants of affected properties and request their comments on the selected remedial actions. The Department of Energy shall provide any such comments to the parties involved in implementing Sec. 108 of Pub. L. 95-604. The Department of Energy shall also inform the Environmental Protection Agency of remedial actions for exceptional circumstances under Subpart C of this rule.

Table A.—[Reserved]

Table B

Average annual indoor radon decay product concentration—including background (WL).....	0.015
Indoor gamma radiation—above background (milliroentgen per hour).....	0.02

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