# NUCLEAR REGULATORY COMMISSION

10 CFR Part 40

RIN 3150-AD65

Radiological Criteria for License Termination of Uranium Recovery Facilities

**AGENCY: Nuclear Regulatory** 

Commission.

ACTION: Final rule.

**SUMMARY:** The U. S. Nuclear Regulatory Commission (NRC) is amending its regulations regarding decommissioning of licensed thorium mills and uranium recovery facilities to provide specific radiological criteria for the decommissioning of lands and structures. This final rule uses the existing soil radium standard to derive a dose criterion (benchmark approach) for the cleanup of byproduct material other than radium in soil and for the cleanup of surface activity on structures to be released for unrestricted use. This final rule is intended to provide a clear and consistent regulatory basis for determining the extent to which lands and structures can be considered to be decommissioned.

**EFFECTIVE DATE:** This regulation becomes effective on June 11, 1999.

FOR FURTHER INFORMATION CONTACT: Frank Cardile, telephone: (301) 415–6185; e-mail: fpc@nrc.gov; or Elaine Brummett, telephone: (301) 415–6606, e-mail: esb@nrc.gov, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

### SUPPLEMENTARY INFORMATION:

- I. Introduction
- II. Background
- III. Summary of Public Comments and Responses to Comments
- IV. Agreement State Compatibility V. Final Environmental Assessment:
- Availability
  VI. Paperwork Reduction Act Statement
  VII. Regulatory Analysis
- VIII. Regulatory Flexibility Certification IX. Backfit Analysis
- X. Small Business Regulatory Enforcement Fairness Act
  - XI. Criminal Penalties

### I. Introduction

The NRC is amending its regulations regarding decommissioning of licensed thorium mills and uranium recovery (UR) facilities (conventional uranium mills and uranium extraction processes such as in situ leach (ISL) facilities) to provide radiological criteria for the decommissioning of lands and structures. These criteria apply to the decommissioning of licensed UR

facilities subject to the NRC's jurisdiction and will also apply to thorium mills if any become licensed in the future. The criteria apply to decommissioning of UR facilities that operate through their normal lifetime and to those that may be shut down prematurely. The NRC will apply these criteria in determining the adequacy of remediation of residual radionuclides resulting from the possession or use of byproduct material.<sup>1</sup>

The intent of this rulemaking is to provide a clear and consistent regulatory basis for determining the extent to which lands and structures at UR facilities must be remediated before decommissioning of a site can be considered complete and the license terminated. The NRC has previously applied site release criteria for decommissioning on a site-specific basis using existing guidance for surface activity and radionuclides other than radium in soil. The NRC believes that inclusion of criteria in the regulations will result in more efficient and consistent licensing actions related to site remediation activities.

### II. Background

On August 22, 1994 (59 FR 43200), the NRC published a proposed rule to amend 10 CFR Part 20 of its regulations "Standards for Protection Against Radiation" to include radiological criteria for license termination as subpart E. The proposed rule applied to uranium mills and other NRC-licensed facilities, but did not apply to mill tailings or to soil radium cleanup at mills because they are regulated under 10 CFR Part 40. Appendix A.

10 CFR Part 40, Appendix A.
On July 21, 1997 (62 FR 39058), the
NRC published a final rule that codified
radiological criteria for license
termination for NRC licensees, but
excluded UR facilities. The NRC
excluded UR facilities from the scope of
the final cleanup rule to allow further
consideration of the issues unique to the
decommissioning of these facilities.
These unique issues include the existing
regulatory framework for UR facilities
and the nature of contamination at UR
facilities, both of which are discussed
below.

Under the existing regulatory framework for UR facilities, the Environmental Protection Agency (EPA) has the authority to set cleanup standards for uranium and thorium mills and, based on that authority,

issued regulations in 40 CFR Part 192 that contain some decommissioning criteria for these facilities. NRC's regulations in 10 CFR Part 40, Appendix A, Criterion 6(6), conform to EPA's standards for radium in soil. Appendix A also provides ground-water protection criteria.

Therefore, this rulemaking addresses only the radiological criteria for decommissioning of lands and structures. The rule only applies to those UR facilities that do not have an approved decommissioning plan for buildings and soil when the rule becomes effective. The sites with approved decommissioning plans may request an amendment to their license to adopt the criteria of this rule after the revision to Criterion 6(6) is

promulgated.

The applicable cleanup standards for soil radium in 10 CFR Part 40, Appendix A, Criterion 6(6), address the main contaminant at uranium mills in the large areas where windblown contamination from the tailings pile has occurred, and to a lesser extent, at ISLs in holding/settling ponds and process or bleed solution spills. These standards require that the concentration of radium (Ra-226 at UR facilities, Ra-228 at thorium mills) not exceed the background level by more than 5 pCi/g (0.19 Bq/g) in the first 15 cm (6 inches) of soil and 15 pCi/g (0.56 Bq/g) for every subsequent 15 cm (6 inch) layer. However, in other mill and ISL site areas proximate to locations where radium contamination exists (e.g., under/around the mill/process building, in a yellow cake storage area, and under/around an ore crusher), uranium (U-nat) is the radionuclide of concern. At least one mill site must also address soil cleanup of thorium (Th-230, the parent of Ra-226, is usually in approximate equilibrium (same activity concentration) with Ra-226) because thorium is more mobile in the acidic milling solutions and leaches farther into the ground than the radium under raffinate ponds and heap leach pads. Because 10 CFR Part 40, Appendix A, does not have cleanup standards for surface activity or for soil contamination from radionuclides other than radium, NRC guidance documents have been the source of cleanup criteria for residual uranium, thorium, and building surface

An additional difficulty for remediation of UR facilities is that the residual radionuclides to be addressed in the site decommissioning are also present in the surrounding background soil in elevated and widely variable concentrations. Some mill sites even have uranium mine pits and/or piles of

<sup>&</sup>lt;sup>1</sup> As defined in 10 CFR Part 40, byproduct material is the tailings or wastes produced by the extraction of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes.

overburden soil containing low-grade ore on or adjacent to the areas to be remediated. This complicates the determination of background values and limits the ability of the licensee to distinguish residual radioactivity from naturally occurring (in-situ) radioactivity.

To allow for consideration of these issues, the NRC also published, on July 21, 1997 (62 FR 39093), a request for additional comments on regulatory options for decommissioning of UR facilities. Included as part of the request was a discussion of an option to codify a dose objective for radionuclides other than radium (uranium and thorium) at UR facilities consistent with the radium cleanup standard. Under this approach, UR facilities would use the dose, excluding radon, from radium at the cleanup standard in existing 10 CFR Part 40, Appendix A, Criterion 6(6), as a benchmark for the cleanup of building surface activity and radionuclides other than radium in soil. Commenters were requested to provide input on options for decommissioning and, specifically, on the benchmark approach.

Use of the benchmark approach would provide for a common dose criterion across a UR site for those areas contaminated with radium and for those areas contaminated with other radionuclides.

The radium dose benchmark approach would require UR licensees subject to the rule to calculate the potential total effective dose equivalent to the average member of the critical group for the site that would result from the radium standard within 1000 years, based upon site-specific parameters. These licensees would be required to provide justification for the models and parameters selected in the dose calculations. The dose from the 5 pCi/ g (0.19 Bq/g) radium standard would be applicable for most of the site contamination. Licensees would then remediate the site such that the residual radionuclides (byproduct material) remaining on the site that are distinguishable from background would not result in a dose that is greater than that which would result from the radium soil standard. The radionuclides of concern are uranium and thorium, because it is assumed that the progeny of Ra-226 are at acceptable levels when the radium standard is achieved. Licensees would also be required to demonstrate that doses were "as low as is reasonably achievable" (ALARA). In the unlikely event that a site benchmark dose (before application of ALARA) exceeds 100 mrem/yr (1 mSv/yr), the NRC staff would consult with the

Commission before approving such a benchmark dose.

# III. Summary of Public Comments and Responses to Comments

Comments received on the 1994 proposed rule for 10 CFR Part 20 subpart E were summarized in NUREG/CR-6353 and in the final rule notice (62 FR 39058, July 21, 1997). The eleven responses (nine commenters) to the July 21, 1997, request for additional comments on radiological criteria for UR facilities are addressed here.

# A. Comments on Approach to the Criteria

One commenter indicated that the standards should be technically-based, protective of human health, and based on a substantial fraction of the 100 mrem/yr (1 mSv/yr) public dose limit. The use of dose-objective standards was encouraged. Evaluation of radon and thoron exposure was considered essential. This commenter also pointed out that the benchmark approach would codify a different dose limit for each facility.

The EPA commented that the soil radium standard of 5 pCi/g (0.19 Bq/g) is consistent with the minimally acceptable dose limit of 15 mrem/yr (0.15 mSv/yr) for the residential scenario, and that for other land use scenarios, the cleanup standards are more stringent for Ra-226, Ra-228, Th-232, and Th-230. The EPA also cautioned that a dose limit for uranium cleanup should not exceed 15 mrem/yr (0.15 mSv/yr).

A third commenter stated that the proposed rule is not acceptable because doses resulting from the benchmark approach could exceed 100 mrem/yr; NRC's existing guidance on cleanup of uranium, thorium, and surface activity should be used to set the minimum requirements; the expected dose from the radium standard should be clarified: the radon dose should be included in demonstrating compliance; and the time frame for dose modeling should be 10,000 years. The commenter also indicated that the proposed approach seems to allow a total dose of twice the radium dose; and that if more types of areas are to be included than those indicated in the proposal, then the enlargement of scope would require additional notice and review.

Six other commenters supported the Ra-226 benchmark dose approach for cleanup of other radionuclides such as U-nat, Th-230, and Th-232. These commenters indicated that the existing regulatory framework is appropriate and provides for flexibility to allow optimum tailings disposal on a site-

specific basis. One of these commenters also pointed out that uranium mill sites will be turned over to the custodial care of the Department of Energy (DOE) or the State for long-term care, effectively eliminating substantial portions of these sites from the public exposure pathways. In addition, some of the vicinity properties remediated with neighboring abandoned mills (under the DOE's's Uranium Mill Tailings Remedial Action Project) have deposits of contamination (Ra-226, Th-230, or Unat) above the limits remaining under the supplemental standards provisions of 40 CFR 192.21.

A. Response: The NRC agrees with the need to develop regulations that are protective of public health and safety with regard to decommissioning of UR facilities. NRC has previously addressed considerations related to radioactivity and dose to the public, public health aspects, fraction of the 100 mrem/yr (1 mSv/yr) dose, and the rationale for excluding the radon dose in Sections A.2.2.1, A.2.2.2, and F.6 of the July 21,1997, Federal Register notice (62 FR at 39060-64 and 39082) for the final rule for 10 CFR Part 20, subpart E; those discussions remain applicable to this final rulemaking.

As discussed above, the UR facilities have large areas contaminated with radium in soils where the existing radium standard is applied. The NRC believes that it is important to promulgate cleanup standards for other residual radionuclides that are consistent with the radium cleanup standards. Use of such an approach would result in a common dose criterion across an entire UR site, both for those areas contaminated with radium and for those areas contaminated with uranium and thorium. As noted above, the 5 pCi/g radium standard was promulgated by EPA for UR sites. The 5 pCi/g radium value has also been recommended as an exemption level by the Board of Directors of the Conference of Radiation Control Program Directors (October 1998) for the Suggested State Regulations on technologically enhanced naturally occurring

The NRC staff's preliminary dose modeling, using realistic parameter values and the RESRAD code, indicates that at typical UR facilities, where the background radiation results in doses of over 200 mrem/yr (2.0 mSv/yr), the Ra-226 standard of 5 pCi/g (0.19 Bq/g) could typically result in a potential peak annual dose on the order of 20 to 35 mrem/yr (0.2 to 0.35 mSv/yr) to the average member of the critical group. Although it is possible that some site-

radioactive materials.

specific parameter values and subsurface contamination could result in a higher benchmark dose than that estimated by the staff for the various scenarios, the staff has high confidence that a site-specific dose using the benchmark approach will typically be a small fraction of 100 mrem/yr (1 mSv/ yr), and in all cases will not exceed 100 mrem/yr (1 mSv/yr). The rule also requires licensee's to demonstrate that doses are ALARA which should result in a potential dose of less than 25 mrem/yr (0.2 mSv/yr) from the residual Ra-226 on the remediated site for most sites. Therefore, the potential health risk should be similar to the NRC dose limit established for other facilities in Part 20, subpart E, and approximate the level suggested in the EPA comment.

The radium benchmark dose modeling results are greater than the 5 pCi/g (0.19 Bq/g) radium modeling results reported by the EPA. The main reason for the difference in results is that the EPA modeled a much smaller area of contamination than that used by NRC staff (100 m<sup>2</sup> versus 404,687 m<sup>2</sup>). Also, EPA modeled a much smaller fraction of time an individual would spend outdoors (0.02 versus 0.25) and used a less conservative root depth value (0.9 versus 0.25 meters) which generally decreases the calculated potential dose. What is not factored into the dose modeling is the low probability of anyone constructing a house or growing a large garden on the areas of residual contamination at these facilities. The UR facilities are in semiarid (7-15 inches (18-39 cm) annual precipitation), sparsely populated areas  $(1-13 \text{ persons/mile}^2)$   $(0.4-5 \text{ persons/mile}^2)$ km<sup>2</sup>)) where mining and grazing (3 cows/acre (1 cow/1348 m<sup>2</sup>)) are the main land uses.

The existing regulatory framework does not provide criteria for the cleanup of radionuclides other than radium in soil. Also, the existing guidance does not provide dose criteria, so additional criteria are warranted. In areas where there is more than one residual radionuclide, the benchmark dose would apply to the sum of all radionuclides present in that area (i.e., radium, uranium, thorium, etc.). This is indicated in the rule text, and in draft guidance for implementation of the benchmark approach, where it is stated that, for each 100 m<sup>2</sup> area, the unity rule will apply such that the sum of the ratios for each radionuclide of the concentration present to the concentration limit may not exceed "1" (i.e., unity). The rule text and guidance also stipulate that the total effective dose equivalent limit is based on the peak annual dose within a 1000 year

period to the average member of the critical group. This time frame is in keeping with the EPA regulatory time frame for these facilities (40 CFR Part 192).

Only portions of uranium mill sites and no portion of ISL facilities are anticipated to be turned over to the custodial care of Government entities. The radium standard applies to all areas of a site except the disposal cell, regardless of future use. The NRC staff plans a similar approach for the criteria for other radionuclides. The restricted use of areas that will be in perpetual custodial care could be considered under the ALARA provision, if cleanup is difficult or expensive in these areas.

### B. Radionuclides at UR Sites are Naturally Occurring and of Variable Concentration in Nature

Several commenters indicated that the residual radionuclides at UR sites (uranium, thorium, radium) are naturally occurring in the local environment and that there is significant variability in soil background concentrations of these radionuclides, in particular at UR facilities where uranium pit mines or mineral outcrops exist. This leads to variability in potential dose such that the 25 mrem/ yr (0.25 mSv/yr) dose in Part 20 subpart E would be indiscernible in the natural variability of background at a UR site. Any concentration standard must account for the significant variability in background and state that the limits are for "concentrations above background" at the different areas of the site. Also, two commenters indicated that a statistical approach, not just an average value, should be used to determine the background values for a site.

It was also mentioned that measurement of U-238 and Th-230 at levels above background, which result in an annual dose to residents of 25 mrem (0.25 mSv), would not be possible using reasonably available field techniques and that the additional cost of laboratory analyses to demonstrate compliance could be \$100,000 per acre.

Several commenters stated that there is no reliable way to distinguish natural (in situ) ore material from processed (licensed) ore. A related concern was that decommissioning standards for UR facilities must not regulate mining activities and the associated ore material that may be present at UR sites.

B. Response: As noted above in Section II, and as described in the rule implementation guidance, the radionuclide dose limit is applied to the level of licensed (byproduct) material distinguishable from background. Site cleanup guidance indicates that

background values should be based on areas with characteristics similar to the contaminated area(s) and that distinct areas of the site could have different background values. Statistical approaches, such as those discussed in the Multi-Agency Radiation Survey and Site Investigation Manual (NUREG–1575, 1997), will be considered.

Field measurements for soil U-nat and Th-230 in general are difficult and not just in the concentration equivalent of 25 mrem/yr (0.25 mSv/yr). Laboratory measurements are practical because site-specific dose modeling provides derived concentration limits for U-nat and Th-230 that can exceed current guideline values. For most sites, cleanup of soil U-nat and Th-230 would involve less than an acre (4,047 m²). Therefore, the costs of sampling and of laboratory analysis for these radionuclides would be a minor part of the decommissioning costs.

Distinguishing in situ ore from processed ore material can be a problem on some sites and is addressed in the guidance. The NRC will regulate only NRC-licensed materials remaining at UR facilities, not in situ ore or mine waste. In determining compliance with the new regulation, the NRC staff will consider 10 CFR 40.42 (j) and (k) that state, in part, that as a final step in decommissioning, the licensee shall demonstrate that the site is suitable for release and that reasonable effort has been made to eliminate residual radioactive contamination.

## C. Considerations of Risks, Costs, and Benefits of Cleanup

Several commenters pointed out that the actual risk of excavating and moving dirt (construction and transport accident risks that are actuarial) must be compared against health risks of radiation exposure which have not been demonstrated below 10 rem/yr (0.1 Sv/ yr). The risk of cleaning up areas to below regional background levels would likely result in net human health and environmental detriment. Lowering of the current radium standard for uranium and thorium could cause undue economic burden to industry and the Government based on the need for cleanup of large soil areas and would not result in significant (if any) risk reduction.

At ISL facilities, lowering dose criteria could result in large areas retroactively becoming disposal areas requiring substantial and costly cleanup, and could inhibit efficiency of mining if irrigation practices with restoration fluids were effectively prohibited.

C. Response: The NRC considered the risk of the cleanup work in the regulatory analysis. The radium standard is not lowered by the rulemaking; therefore, there is no undue economic burden for licensees. Providing a radium benchmark dose standard for U-nat and Th-230 should not result in significant decrease in the soil concentration allowed to remain, compared to current guidance.

### D. Regulatory Guidance

Several commenters offered suggestions for regulatory guidance and requested that the regulatory guidance implementing the standard include determination of background and dose modeling flexibility.

D. Response: The NRC recognizes that there may be difficulties in the determination of background concentrations of radionuclides at some UR facility sites. The NRC staff has prepared guidance (in the form of evaluation criteria) on mill site cleanup in the draft Standard Review Plan (SRP) for reclamation plans. This draft SRP will soon be published for public comment. The NRC staff is preparing another chapter of this SRP to address the implementation of the radium benchmark dose approach and dose modeling flexibility for this unique set of licensees. This chapter will also be published as a draft for public comment before finalization and incorporation into the SRP.

### IV. Agreement State Compatibility

This rule will be a matter of compatibility between the NRC and the Agreement States, thereby providing consistency among State and Federal safety requirements. The final rule on radiological criteria for license termination for nuclear facilities issued July 21, 1997 (62 FR 39058), was determined to be a Division 2 matter of compatibility under the previous Commission policy for Agreement State compatibility. As noted for that final rule (at 62 FR 39079), Division 2 rules address basic principles of radiation safety and regulatory functions. Although Agreement States must address these principles in their regulations, the use of language identical to that in NRC rules is not necessary if the underlying principles are the same. Also, the Agreement States may adopt requirements more stringent than NRC rules. Under the current NRC policy, Category C compatibility would be consistent with that indicated in 62 FR 39079, and, hence, the NRC has determined that this rule will be a Category C matter of compatibility.

### V. Finding of No Significant Environmental Impact: Availability

The NRC has determined under the National Environmental Policy Act of 1969, as amended, and the regulations in Subpart A of 10 CFR Part 51, that this rule will not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required. The final rule amends the NRC's regulations in 10 CFR Part 40 to include radiological dose criteria for decommissioning of lands and structures at UR facilities. The rule will affect 11 current NRC licensees. The environmental impact of this rule will be insignificant compared to current practice and to the decommissioning process in general because the areas requiring cleanup for residual radionuclides other than radium are small.

The final environmental assessment and finding of no significant impact on which this determination is based are available for inspection in the NRC Public Document Room, 2120 L Street NW (Lower Level), Washington, DC. Single copies of the environmental assessment and the finding of no significant environmental impact are available from Elaine Brummett, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Mailstop T7–J9, Washington, DC 20555–0001, telephone (301) 415–6066.

#### VI. Paperwork Reduction Act Statement

This final rule does not contain a new or amended information collection requirement subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget, approval number 3150–0014.

#### **Public Protection Notification**

If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

### VII. Regulatory Analysis

The NRC has prepared a regulatory analysis on this final regulation. The analysis examines the costs and benefits of the alternatives considered by the NRC. The analysis is available for inspection in the NRC Public Document Room, 2120 L Street NW (Lower Level), Washington, DC. Single copies of the analysis may be obtained from Frank Cardile, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear

Regulatory Commission, Mailstop T–C24, Washington, DC 20555–0001, telephone (301) 415–6185.

# VIII. Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the NRC certifies that this rule, if adopted, does not have a significant economic impact upon a substantial number of small entities. The rule will affect 11 current NRC licensees and any future licensees who will be conducting uranium milling operations. These licensees are not small entities as defined in 10 CFR 2.810.

### IX. Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this final rule and therefore, a backfit analysis is not required for this final rule because these amendments do not involve reactor operations and do not involve any provisions that would impose backfits as defined in 10 CFR 50.109(a)(1).

### X. Small Business Regulatory Enforcement Fairness Act

In accordance with the Small Business Regulatory Enforcement Fairness Act of 1996, the NRC has determined that this action is not a "major" rule and has verified this determination with the Office of Information and Regulatory Affairs, Office of Management and Budget.

### **XI. Criminal Penalties**

For the purposes of Section 223 of the Atomic Energy Act (AEA), the NRC is issuing the final rule under one or more of sections 161b, 161i, or 161o of the AEA. Willful violations of the rule will be subject to criminal enforcement.

### List of Subjects in 10 CFR Part 40

Criminal penalties, Government contracts, Hazardous materials transportation, Nuclear materials, Reporting and recordkeeping requirements, Source material, Uranium.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553; the NRC is adopting the following amendments to 10 CFR Part 40.

# PART 40—DOMESTIC LICENSING OF SOURCE MATERIAL

1. The authority citation for Part 40 continues to read as follows:

**Authority:** Secs. 62, 63, 64, 65, 81, 161, 182, 183, 186, 68 Stat. 932, 933, 935, 948,

953, 954, 955, as amended, secs. 11e(2), 83, 84, Pub. L. 95-604, 92 Stat. 3033, as amended, 3039, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2014(e)(2), 2092, 2093, 2094, 2095, 2111, 2113, 2114, 2201, 2232, 2233, 2236, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688 (42 U.S.C. 2021); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 275, 92 Stat. 3021, as amended by Pub. L. 97-415, 96 Stat. 2067 (42 U.S.C. 2022); 193, 104 Stat. 2835 as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243).

Section 40.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 40.31(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 40.71 also issued under sec. 187, 68 Stat. 955 (42 U.S.C.

2. In 10 CFR Part 40, Appendix A, Criterion 6(6), a second paragraph is added to read as follows:

### Appendix A to Part 40

## I. Technical Criteria

Criterior 6 \* \* \*

(6) \* \* \*

Byproduct material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the above standard (benchmark dose), and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard (not including radon) on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff. This requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.

Dated at Rockville, Maryland, this 6th day of April 1999.

For the Nuclear Regulatory Commission.

#### Annette L. Vietti-Cook,

Secretary of the Commission. [FR Doc. 99-9035 Filed 4-9-99; 8:45 am] BILLING CODE 7590-01-P

#### **NUCLEAR REGULATORY COMMISSION**

10 CFR Part 72

RIN 3150-AG02

**Elimination of Reporting Requirement** and 30-Day Hold in Loading Spent Fuel After Preoperational Testing of Independent Spent Fuel Storage or Monitored Retrievable Storage Installations

AGENCY: Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its regulations to eliminate the requirement that a report of the preoperational testing of an independent spent fuel storage installation or monitored retrievable storage installation be submitted to the NRC at least 30 days before the receipt of spent fuel or highlevel radioactive waste. Experience has shown that the NRC staff does not need the report or the holding period because the NRC staff is on site and evaluates preoperational testing as it occurs. This amendment will eliminate an unnecessary regulatory impact on licensees.

EFFECTIVE DATE: May 12, 1999.

SUPPLEMENTARY INFORMATION:

FOR FURTHER INFORMATION CONTACT: Gordon Gundersen, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6195, e-mail geg1@nrc.gov.

## **Background**

On September 14, 1998 (63 FR 49046), the NRC published a proposed rule in the **Federal Register** that would amend NRC's regulations in 10 CFR part 72 to eliminate a preoperational testing reporting requirement and a 30-day hold in loading spent fuel. Part 72 requires that the conditions for a site-specific license (10 CFR 72.24(g)) and the conditions for a Certificate of Compliance (CoC) (10 CFR 72.236(l)) contain requirements for the performance of preoperational testing by the site-specific licensee or the general licensee, respectively. The licensee is required to complete the preoperational testing program described in the

applicable Safety Analysis Report (SAR) before spent fuel is loaded into an independent spent fuel storage installation (ISFSI) or before spent fuel or high-level radioactive waste (HLW) is loaded into a monitored retrievable storage installation (MRS). Information on the preoperational test program, including the specific tests and their acceptance criteria, are contained in the SAR submitted by the site-specific licensee or by the certificate holder for the design of the spent fuel storage cask to be used by the general licensee.

Section 72.82(e) requires licensees to submit to the NRC a report of the preoperational test acceptance criteria and test results at least 30 days before the receipt of spent fuel or HLW for loading into an ISFSI or MRS. However, the licensee is not required to submit test procedures, only a summary report of the test results. A copy of this report is subsequently placed in the NRC Public Document Room (PDR). The purpose of the 30-day period is to establish a sufficient hold point to ensure that the NRC has sufficient time to inspect a new licensee's preparations and, if necessary, exercise its regulatory authority before spent fuel is received at an ISFSI or spent fuel and HLW at an MRS. The licensee is not required to obtain NRC approval of the report before commencing loading operations.

### **Comments on the Proposed Rule**

The Commission received four letters commenting on the proposed rule. Copies of the letters are available for public inspection and copying for a fee at the Commission's Public Document Room, located at 2120 L Street, NW. (Lower Level), Washington, DC. One letter was from NEI, one letter from a CoC holder, and two letters were from utilities holding 10 CFR part 50 reactor licenses. All of the letters supported the proposed rule. One utility quantified the savings of eliminating the 30-day hold as more than \$300,000.

#### **Discussion**

The requirement for a preoperational test report and 30-day hold period was added to the part 72 regulations governing licensing requirements for ISFSIs and an MRS at the time they became effective on November 28, 1980 (45 FR 74693), and before the NRC staff had any practical experience in licensing such facilities. However, in the intervening period, the Commission's practice has been for the NRC staff to maintain an extensive oversight presence during the preoperational testing phase of ISFSIs, reviewing the acceptance criteria, preoperational test, and test results as