[7590-01]

NUCLEAR REGULATORY COMMISSION
[10 CFR Parts 30, 40, 70, 150, and 170]

CRITERIA RELATING TO URANIUM MILL TAILINGS
AND CONSTRUCTIONS OF MAJOR PLANTS

AGENCY: U.S. Nuclear Regulatory Commission

ACTION: Proposed and immediately effective rules.

SUMMARY: The proposed amendments to 10 CFR Parts 40 and 150 would incorporate licensing requirements for uranium and thorium mills and their tailings and wastes into the Commission's regulations. The proposed amendments to Parts 40 and 150 are derived from a draft generic environmental impact statement on uranium milling and the requirements contained in the Uranium Mill Tailings Radiation Control Act of 1978. The proposed amendments to Parts 30 and 70 would require a final environmental assessment be completed by the NRC prior to construction of other types of major plants. The proposed amendments to 10 CFR 170 set forth the fees to be charged in conjunction with licenses authorizing the possession of tailings. These proposed regulation changes and the draft generic environmental impact statement referred to above will be the subjects of public hearings to be held in October at locations in western milling regions. The general purpose of these hearings will be to receive comments on these proposed regulation changes and the draft generic environmental impact statement. More specific information concerning these hearings will be made available in a forthcoming FEDERAL REGISTER notice.

DATE: Comment period expires

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/433-5910) or Hubert J. Miller, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/427-4103).

SUPPLEMENTARY INFORMATION: In a notice published in the FEDERAL REGISTER on June 3, 1976, the U.S. Nuclear Regulatory Commission announced its intention to prepare a generic environmental impact statement (GEIS) on uranium milling. The Commission was acting partly in response to a petition for rulemaking filed with the Commission by the Natural Resources Defense Council, Inc. The Commission has evaluated the environmental impacts of uranium milling and has published a draft GEIS on this subject (NUREG-0511).

The GEIS concludes that there is a need for certain definitive rule changes to the Commission's regulations to establish specific uranium mill licensing requirements, particularly with regard to the tailings or wastes generated during the milling process. The rule change proposed herein to 10 CFR 40 will incorporate into the Commission's regulations the additional needed requirements derived from the draft GEIS. These proposed additional requirements and potential alternatives are discussed in detail in the draft GEIS along with their supporting bases. It is

not possible to provide here a complete summary of all the complex issues, alternatives, and supporting technical bases addressed in the draft GEIS. In formulating proposals for dealing with uranium milling problems to assure public health and safety and environment protection, the NRC staff has developed a full range of perspectives and facts. It has analyzed the problems from short- and long-term points of view. It has evaluated potential health risks to individuals living in the immediate vicinity of mills, to individuals living in mining and milling regions, to mill workers, and to large populations which can be exposed to radon. Potential impacts on land use, air quality, water quality, water use, biota and soils, and potential socioeconomic effects of milling operations have been assessed. Alternatives for tailings disposal which have been examined range from the past practice of doing virtually nothing to isolate tailings, to utilizing potential advanced treatment methods such as incorporation of tailings in a solid matrix, such as cement or asphalt. The major institutional questions considered by the NRC in developing needed rule changes include: the need for land use controls and site monitoring at tailings disposal sites; methods of providing financial surety so that tailings disposal and site decommissioning are accomplished by the milling operator; and the need for and methods of funding any long-term surveillance which may be necessary at tailings disposal sites. For additional information concerning these issues, the draft GEIS should be reviewed. (It is suggested that readers of the GEIS start with the Summary; the chief bases for these proposed regulations are presented there. In preparing the Summary, the staff made a special effort to refer to specific sections of the text which are pertinent to each issue discussed. This

has been done to make it easy for readers to find and consider all of the information that has been developed, so that they can draw their own conclusions about the issues addressed.) The major conclusions reached in the draft GEIS relative to needed rule changes, stated here in broad terms, are:

1. Tailings areas should be located at remote sites to reduce potential population exposures to the maximum extent reasonably achievable.
2. Tailing areas should be located at sites where disruption and dispersion by natural forces are eliminated or reduced to the maximum extent reasonably achievable.
3. The "prime option" for tailings disposal is placement below grade.
4. If tailings are located above ground, stringent siting and design criteria should be adhered to.
5. Sufficient cover should be placed over tailings to reduce radon exhalation to a calculated value of less than 2pCi/m^2sec above natural background levels.
6. Steps should be taken to reduce seepage of materials into groundwater to the maximum extent reasonably achievable.
7. Final disposition of tailings should be such that ongoing active maintenance is not necessary to preserve isolation.
8. Milling operations should be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable. Yellowcake drying and packaging operations should cease when effluent control devices are inoperative or not working at their reasonably expected best performance levels.

9. Financial surety arrangements should be established to ensure that sufficient funds are available to cover the costs of decontamination and decommissioning the mill and site and for the reclamation of tailings areas.

10. Sites on which tailings are stored should be controlled through ownership and custody by a government agency unless, in special cases as might occur in deep mine disposal, this is determined unnecessary.

11. Funds should be provided by each mill operator to cover the costs of long-term site surveillance.

12. Construction of a uranium mill or tailings disposal area should not commence until the NRC has completed its final environmental impact statement required by the National Environmental Policy Act (NEPA).

The rule changes proposed herein would also incorporate into the Commission's regulation 10 CFR 40 and 150 the requirements established by the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3201). This legislation, among other things, establishes a program to regulate mill tailings during uranium or thorium ore processing at active mill operations and after termination of such operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public. In the Commission's view, the legislation also requires that the NRC exercise concurrent jurisdiction over tailings in Agreement States until November 8, 1981. The UMTRCA, among other things, specifies:

1. A revised definition of "byproduct material" to include tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content;
2. Ownership and custody requirements for byproduct material;
3. Provisions for bonds, sureties, or other financial arrangements covering the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material;
4. Provisions for Agreement State authority under Section 274 of the Atomic Energy Act; and
5. Provisions for NRC grants to States to aid in the development of State regulatory programs.

The UMTRCA further establishes certain responsibilities and authorities whereby the Environmental Protection Agency (EPA) must develop standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material. Such generally applicable standards for nonradiological hazards must provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended. The Commission and any State permitted to exercise authority under § 274b.(2) of the Atomic Energy Act must apply these standards of general application in licensing actions involving byproduct material. In this regard, the Commission notes that the EPA has published (43 FR 58946), for comments, proposed regulations to implement the requirements of the Solid Waste Disposal Act, as amended.

The Commission believes that the requirements in the amendments proposed herein, along with applicable requirements in other parts of the Commission's regulations, will be at least comparable to presently published requirements applicable to the possession, transfer, and disposal of similar material regulated by the EPA under the Solid Waste Disposal Act, as amended. Since final regulations have not been adopted by EPA to implement the mandates of the Solid Waste Disposal Act, additional amendments to the Commission's regulations may be required. The Commission intends to follow the progress of the EPA rulemaking action to implement regulations under the Solid Waste Disposal Act. Any final regulations pertaining to byproduct material adopted by the Commission will be comparable, to the maximum extent practicable, to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulation by EPA under the Solid Waste Disposal Act, as amended. To ensure comparability, concurrence of final regulations will be obtained from the Administrator of EPA as required by the UMTRCA. In addition, the Administrator of EPA will be specifically requested to provide comments and recommendations concerning this matter.

The significant features of the proposed amendments to 10 CFR 40 are:

1. § 40.1 of Part 40 is being amended to include the definition of "byproduct material." This amendment, to include uranium and thorium mill tailings as byproduct material as a licensable material in the Commission's regulations, is required by the recently enacted UMTRCA. Discrete above ground wastes from in-situ or solution extraction are covered by this definition, although the underground ore bodies depleted by the extraction

process are not covered. While the Commission has considered amending its regulation 10 CFR 30, "Rules of General Applicability to Licensing of Byproduct Material," to specify licensing requirements relative to tailings, the Commission considers it more appropriate to amend 10 CFR 40 since the legislative record of the UMTRCA makes clear that the expanded definition of byproduct material covers only mill tailings or wastes which are exclusively associated with 10 CFR 40 licensing matters.

2. A new § 40.26 is being added to 10 CFR 40 to establish a temporary general license to authorize the possession and storage of mill tailings or wastes to keep existing milling operations in both Agreement and non-Agreement States from being in technical violation of the Atomic Energy Act of 1954, as amended by UMTRCA. The Commission believes this general license is consistent with the Congressional intent to implement the UMTRCA in a manner designed to minimize unnecessary disruption. As provided in § 40.20 of 10 CFR 40, a general license is effective without the filing of an application or the issuance of licensing documents to particular persons. This proposed general license is applicable only to persons who possess appropriate specific licenses issued by the Commission or Agreement States which authorize uranium milling activities. The authority to possess, use, or own tailings under the general license shall expire concurrently with the expiration or renewal of each NRC or Agreement State specific milling license.

The Commission notes that all of its existing active milling licenses have been reviewed or are being reviewed under the

provisions of the National Environmental Policy Act (NEPA). All NRC licenses presently contain, or will contain, requirements for tailings reclamation, mill and site cleanup, and surety arrangements to cover these costs. For the most part, present requirements and conditions are substantially the same as the requirements being proposed herein, and most milling operators involved in non-Agreement States have already committed themselves to specific plans for decommissioning and tailings disposal meeting these requirements. NRC uranium milling licenses that have been granted under the NEPA process during the period over which the NRC's generic environmental impact statement on uranium milling was being developed were issued with the express condition that approved waste generating processes and mill tailings management practices were subject to revision in accordance with the conclusions of the final generic environmental impact statement and any related rulemaking. In the process of reevaluating approved mill operator plans upon expiration or renewal to meet the requirements of the rule change proposed herein, the NRC staff plans to incorporate into applicable specific licenses the authority to possess and store byproduct material covered by this general license.

Under the provisions of this general license, Agreement State licensees will not be required to obtain a specific NRC license until such time as the licensee's Agreement State specific license expires or is renewed. The Commission notes in this regard that there presently exist Agreement State regulations and requirements governing the control of tailings in

Agreement States which appear adequate to protect the public health and safety during the interim period until such licenses expire or are renewed. At such time as each Agreement State license expires or is renewed, it will be necessary at least until November 1, 1981, for the Agreement State licensee to apply for and obtain a specific NRC license covering the possession of byproduct material. The Commission intends to review each application under the NEPA process and impose any necessary requirements as may be necessary to protect the public health and safety. Given that the tailings piles in Agreement States covered by this general license have been in existence for several years, the Commission does not believe that the incremental increase to such piles during the interim time until licenses expire or are renewed will foreclose available alternatives for reducing or avoiding adverse environmental and other effects or result in irreversible or irretrievable commitments of resources. Thus, the Commission has concluded that an environmental impact statement to support this interim general license is not required. The Commission further notes in this regard that the authority to possess, own, or receive title to tailings now defined as byproduct material under this general license is subject to NRC remedial orders as necessary to protect the public health and safety and to correct any situations where events might require more immediate Commission attention to insure proper control of tailings.

3. § 40.31 of Part 40 is being amended by revising § 40.31(a) to cover applications for byproduct material and by adding a new

paragraph (g) to require applicants for mill licenses to propose specifications relating to the operation of mills and disposition of tailings or wastes so as to achieve certain requirements and objectives set forth in a new Appendix A to 10 CFR 40. These requirements and objectives are discussed in detail in the following Item #4.

Since these requirements and objectives deal primarily with presently operating and future milling activities, they do not apply to the remedial action program authorized in Title 1 of the UMTRCA.

4. A new Appendix A entitled, "Criteria Relating to the Operation of Uranium Mills and Disposition of Tailings or Wastes (i.e., byproduct material as defined in Section 11e.(2) of the Atomic Energy Act) Produced by the Extraction or Concentration of Source Material From Ores," is being added to 10 CFR 40. This appendix is divided into four major categories: technical criteria; financial criteria; site and byproduct material ownership; and long-term site surveillance. The technical criteria deal primarily with specifications for siting tailing areas, options for storing tailings below and above ground, seepage controls, minimum cover requirements for tailings at the end of milling operations, preoperational site monitoring requirements, and effluent controls during milling operations. These criteria were basically derived from the GEIS discussed above. The guiding principles in the development of these criteria were that: tailings should be isolated from people and the environment in such a manner to reduce potential exposures to

as low as is reasonably achievable; the site where tailings are stored should be returned to conditions reasonably near those of the surrounding environment; and final disposition of tailings should be such that active maintenance is not necessary to preserve isolation. The bases for these criteria are set forth in detail in the GEIS. The Commission believes that under these criteria tailings can be disposed of at reasonable costs and in such a manner that conditions at disposal sites will be reasonably near those of surrounding environs. Thus, the need for ongoing active care and maintenance programs to redress degradation of the tailings isolation by natural weathering and erosion forces can be essentially eliminated. In that the proposed technical criteria for mill siting and tailings disposal areas preclude location of tailings or milling operations in an area that could be disrupted by natural events such as flooding, these criteria will assure that the requirements of Executive Order 11988 of May 23, 1977, concerning flood plain management are met. Therefore, as well as assuring tailings isolation, floodplains will be protected.

The ownership, surety, and long-term funding criteria delineated in the new Appendix were derived from the GEIS. They are also requirements established under the UMTRCA. The Commission believes that compliance with these criteria will ensure that milling operators, who are responsible for the generation of tailings, will bear the costs of tailing reclamation and long-term site surveillance and that government ownership of tailings and disposal sites will ensure adequate long-term control of the tailings.

With regard to long-term site surveillance, the UMTRCA requires the final disposition of tailings or wastes at milling sites to be such that the need for long-term maintenance and monitoring of such sites after license termination shall be minimized, and to the maximum extent practicable, eliminated. These requirements are delineated in the long-term surveillance criterion set forth in the new Appendix. In order to confirm the integrity of a stabilized tailings system, the Commission proposes to require annual site inspections by site owners (e.g., an appropriate government agency). Depending on the specific conditions of a particular site, as determined during the period following site reclamation and before termination of a mill operator's license, a determination may be made that more frequent inspections or more comprehensive monitoring are required. More specific guidance on long-term surveillance may be issued in the future after more experience has been gained relative to this issue. Results of such inspections would be submitted to the Commission within 60 days following each inspection.

The criteria in the new Appendix A would become effective following completion of the rulemaking action contemplated herein by the Commission, except that criterion 11 would not become effective until November 8, 1981, under the provisions of the UMTRCA.

5. Paragraphs (b) of § 40.14 and (e) of § 40.32 of 10 CFR 40 are being amended to require the Director of the Commission's Office of Nuclear Material Safety and Safeguards or his designee to make a positive finding on an applicant's proposed plans as

meeting the requirements and objectives in Appendix A prior to commencement of construction of a mill which produces byproduct material. This finding would be that made in the final environmental impact statement (or other environmental assessment) prepared pursuant to Part 51 of this chapter. These proposed amendments will delete paragraph (b) of § 40.14 so as to preclude exemptions from the requirements of §§ 40.31(f) and 40.32(e) of Part 40 and amend paragraph (e) of § 40.32 so as to require the denial of applications for licenses where construction is started before the appropriate environmental appraisals are completed and documented. The Commission notes in this regard that milling results in the production of large quantities of byproduct material as tailings per year. When construction of a mill commences, nearly irrevocable commitments are made regarding tailings disposal. Given that each mill tailings pile constitutes a low-level waste burial site containing long-lived radioactive materials, the Commission believes that prudence requires that specific methods of tailings disposal, mill decontamination, site reclamation, surety arrangements, and arrangements to allow for transfer of site and tailings ownership be worked out and approved before a license is granted.

The Commission also notes that similar irrevocable and/or irretrievable commitments are involved in the commencement of construction of plants and facilities in which source materials are possessed and used for the production of uranium hexafluoride and commercial waste disposal by land burial. Accordingly, the requirements of the revised paragraphs (b) of § 40.14 and (e) of § 40.32 would apply to these plants and facilities.

The proposed amendments to 10 CFR 30 and 70 also relate to commencement of construction of other types of plants and facilities in which byproduct and special nuclear materials are used and possessed. The Commission also believes commencement of construction of these plants and facilities may also result in irreversible and irretrievable commitments of resources. Therefore, the Commission believes that it is also desirable and necessary that a final environmental impact statement or assessment be completed and documented before authorizing commencement of construction. Thus, 10 CFR 30.11(b), 10 CFR 30.33(a)(5), 10 CFR 70.14(b) and 10 CFR 70.23(a)(7) are being amended to conform to the foregoing amendments to 10 CFR 40.

The proposed amendments to 10 CFR Part 150 are to conform to Part 40's new definition of byproduct material and to Part 40's coverage of such byproduct material in Agreement States for the three years following enactment of UMTRCA. This is in accordance with UMTRCA's provisions requiring NRC licensing of tailings in Agreement States for the three year interim. Pursuant to UMTRCA, however, Agreement States may exercise concurrent jurisdiction over tailings and wastes for the three-year interim. A new proposed § 150.15a is added to enumerate certain authorities reserved in the Commission under UMTRCA. Paragraph (a) is drawn directly from sections 204(f) and 202(a) of UMTRCA. Paragraph (b) is extracted from § 83 of the Atomic Energy Act of 1954, as added by § 202(a) of UMTRCA. The language of UMTRCA and it legislative history indicate that the NRC is to make the determinations under and establish requirements pursuant to § 83, which minimum Federal standards and determinations must, under § 204(e) of the UMTRCA, be met by the Agreement States. New proposed § 150.31 and 150.32 outline requirements in the UMTRCA for Agreement State regulation of tailings or activities that produce such tailings

or wastes. The new requirements, which become effective after November 8, 1981, are taken directly from § 274o of the Atomic Energy Act, as added by § 204(e) of the UMTRCA.

The proposed amendments to 10 CFR 170 establish fees for licensing and inspection actions involving only the management of mill tailings and associated wastes. The proposed fees are based on NRC staff experience involving the review of the environmental and public health aspects of uranium milling and related activities.

PROPOSED REGULATORY CHANGES:

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR 30, 40, 70, 150, and 170 is contemplated.

1. § 40.1 of 10 CFR 40 is amended by revising paragraphs (a) and (b) as follows:

§ 40.1 Purpose.

(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, deliver, or import into or export from the United States source and byproduct materials, as defined in this Part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in this Part do not establish procedures and criteria for the issuance of licenses for materials covered under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021).

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat 919), Title II of

the Energy Reorganization Act of 1974 (88 Stat. 1242), and Title II of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901).

2. § 40.2a of 10 CFR 40 is added to read as follows:

§ 40.2a Temporary coverage in Agreement States.

Until November 8, 1981, the regulations in this Part shall govern the Commission's licensing of byproduct material as defined in this Part in Agreement States.

3. § 40.2b of 10 CFR 40 is added to read as follows:

§ 40.2b Coverage of inactive tailings sites.

(a) Prior to the completion of the remedial action, the Commission will not require a license pursuant to this Part for possession of byproduct material as defined in this Part that is located at a site where milling operations are no longer active, if such site is or is likely to be designated a processing site covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978. The Commission will exert its regulatory role in remedial actions exclusively through concurrence and consultation in the execution of the remedial action pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978.

(b) The Commission will require a license pursuant to this Part for byproduct material as defined in this Part that is located at a site where milling operations are no longer active, if such site is not and will not be covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978; provided, however, that the criteria in Appendix A of this Part will be applied to the maximum extent practicable, with consideration given to the unique circumstances of such inactive sites.

4. § 40.3 of 10 CFR 40 is revised to read as follows:

§ 40.3 License requirements.

No person subject to the regulations in this Part shall receive title to, own, receive, possess, use, transfer, deliver, or import into or export from the United States byproduct material as defined in this Part or any source material after removal from its place of deposit in nature, except as authorized in a specific or general license issued by the Commission pursuant to the regulations in this Part.

5. § 40.4 of 10 CFR 40 is revised by amending paragraphs 40.4(a-1), 40.4(e), and 40.4(l) and adding new paragraphs 40.4(b-1) and 40.4(p).

§ 40.4 Definitions.

* * * * *

(a-1) "Byproduct Material" means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

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(b-1) "Department of Energy" means the United States Department of Energy or its duly authorized representative.

* * * * *

(e) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy except that the Department of Energy shall be considered a person within

the meaning of the regulations in this Part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244)[6] and the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 21), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

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[6]The Department of Energy facilities and activities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(4) Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the Department of Energy, which are not used for, or are part of, research and development activities.

(1) With the exception of "byproduct material" as defined in Section 11e. of the Act, other terms defined in Section 11 of the Act shall have the same meaning when used in the regulation in this Part.

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(p) "Uranium Milling" means any activity that results in the production of byproduct material as defined in this Part.

6. § 40.11 of 10 CFR 40 is revised by changing the word "Administration" to read "Department of Energy" and by adding the words "or the Uranium Mill Tailings Radiation Control Act of 1978" following the words "Energy Reorganization Act of 1974."

7. § 40.13 of 10 CFR 40 is revised to add the following sentence at the end of Paragraph (a): "The exemption contained in this paragraph does not include byproduct material as defined in this Part."

8. § 40.14 of 10 CFR 40 is amended by deleting paragraph 40.14(b).

9. § 40.26 of 10 CFR 40 is added to read as follows:

§ 40.26 General license for possession and storage of byproduct material as defined in this Part.

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this Part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only:

(1) in the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this Part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity; Provided,

that authority to receive title to, own, or possess byproduct material under this general license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this Part;

or

(2) in Agreement States until November 8, 1981, where activities that result in the production of byproduct material are authorized under a specific license issued by the Agreement State on or before May 17, 1979, to byproduct material possessed, or stored at an authorized disposal containment area or transported incident to such authorized activities; Provided, that authority to receive title to, own, or possess byproduct material under such general license shall terminate when such Agreement State license expires or is renewed, whichever first occurs.

(c) The general license in paragraph (a) of this section is subject to:

(i) The provisions of Parts 19, 20, 21, and sections 40.1, 40.2, 40.2a, 40.2b, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of Part 40 of this Chapter;

(ii) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected

could lead to failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Commission may by order deem necessary.

10. § 40.31 of 10 CFR 40 is amended by revising § 40.31(a) and adding a new § 40.31(g) as follows:

§ 40.31 Applications for specific licenses.

(a)(1) Applications for a specific license for source material or for byproduct material produced in conjunction with the uranium milling activity for which a source material license is sought from the Commission should be filed in quadruplicate on Form NRC--2 "Application for Source Material License," with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555. Applications may be filed in person at the Commission's Offices at 1717 H Street, NW., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Md. Information contained in previous applications, statements, or reports filed with the Commission may be incorporated by reference, provided such references are clear and specific.

(2) Applications for specific licenses for byproduct material as defined in this Part not sought in conjunction with a source material license from the Commission for uranium milling shall be filed with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Such applications include, until November 8, 1981, applications for specific licenses from the Commission for such byproduct material generated by uranium milling under an Agreement State license issued or renewed after May 17, 1979.

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(g) An application for a license to receive title to, own, receive, possess, and use source material for uranium milling or byproduct material, as defined in this Part, shall contain proposed specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in Appendix A of this Part.

11. § 40.32 of 10 CFR 40 is amended by revising § 40.32(e) as follows.

§ 40.32 General requirements for issuance of specific licenses.

* * * * *

(e) In the case of an application for a license to possess and use source and byproduct material for uranium milling, production of uranium hexafluoride, commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such a conclusion shall be grounds for denial of a license to possess and use source and byproduct material in such plant or facility.

12. Appendix A is added to Part 40 to read as follows:

Appendix A

Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes (i.e., byproduct material as defined in Section 11 e.(2) of the Atomic Energy Act) Produced by the Extraction or Concentration of Source Material From Ores.

INTRODUCTION. Every applicant for a license to possess and use source material in conjuction with uranium or thorium milling is required by the provisions of § 40.31(g) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or waste resulting from such milling activities. This appendix establisnes technical, financial, ownership, and long-term site surveillance requirements relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located.

I. TECHNICAL CRITERIA

Criterion 1 - Tailings or waste disposal areas shall be located at remote sites so as to reduce potential population exposures and the likelihood of human intrusions to the maximum extent reasonably achievable. To avoid proliferation of small waste disposal sites, byproduct material from in-situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations shall preferably be disposed of at existing large mill tailings disposal sites; consideration will be given to the nature of the wastes, such as their volume and specific activity, and to costs and environmental impacts of transporting the wastes to a large disposal site.

Criterion 2 - Tailings or waste disposal areas shall be located at sites where disruption and dispersion by natural forces are eliminated or reduced to the maximum extent reasonably achievable. In the selection of mill sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. These criteria, which preclude location of tailings or mill site in an area which could be disrupted by natural events, such as flooding, assure that the requirements of Executive Order 11988 concerning floodplain management are met.

Criterion 3 - The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits. The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicant environmental reports) shall reflect this. In some instances, below-grade disposal may not be the most environmentally sound approach, such as might be the case if a high quality groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full, below-grade burial impracticable; for example, bedrock may be sufficiently near surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternate sites are not available. In these cases, it must be demonstrated that an above-grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Criterion 4 - If tailings or wastes are disposed of above ground, the following siting and design criteria shall be adhered to:

(a) Upstream rainfall catchment areas must be minimized to decrease the size of the maximum possible flood which could erode or wash out sections of the tailings disposal area.

(b) Topographic features shall provide good wind protection.

(c) Embankment slopes shall be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this would, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full, self-sustaining vegetative cover shall be established or riprap employed to retard wind and water erosion. Special concern shall be given to slopes of embankments.

(e) The impoundment shall not be located near a potentially active fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the objective of such a design feature would be to enhance the thickness of cover over time.

Criterion 5 - Steps shall be taken to reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. This could be accomplished by lining the bottom of tailings areas and reducing the inventory of liquid in the impoundment by such means as dewatering tailings and/or recycling water from tailings impoundments to the mill. Furthermore, steps shall be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas. Also, tailings treatment, such as neutralization to promote immobilization of toxic substances shall be considered. The specific method, or combination of methods, to be used must be worked out on a site-specific basis. While the primary method of protecting groundwater shall be by isolation of tailings and tailings solutions, disposal involving contact with groundwater will be considered provided supporting tests and analysis are presented demonstrating that the proposed disposal and treatment methods will preserve quality of groundwater.

Criterion 6 - Sufficient earth cover, but not less than three meters, shall be placed over tailings or wastes at the end of milling operations to result in a calculated reduction in surface exhalation of radon from

the tailings or wastes to less than two picocuries per square meter per second above natural background levels. Direct gamma exposure from the tailings or wastes should be reduced to background levels. Plastic or other synthetic caps should not be used to reduce radon exhalation from the tailings or wastes. Cover material must not include mine waste or rock that contain elevated levels of radium; soils used for cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding soils.

Criterion 7 - At least one full year prior to any major site construction, a preoperational monitoring program should be conducted to provide complete baseline data on a milling site and its environs prior to development. Throughout the construction and operation phase of the mill, an operational monitoring program should be conducted to demonstrate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

Criterion 8 - Milling operations shall be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable below the limits in 10 CFR Part 20. The primary means of accomplishing this should be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after efforts have been taken to control emissions at the source to the maximum extent reasonably achievable. Notwithstanding the existence of individual dose

standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. Yellowcake drying and packaging operations should cease when effluent control devices are inoperative or not working at their reasonably expected best performance levels. To control dusting from tailings, that portion not covered by standing liquids should be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration should be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments since this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators should develop written operating procedures specifying the methods of control which will be utilized.

Criterion 8(A) - Daily inspections of tailings or waste retention systems shall be conducted and documented. The appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, shall be immediately notified of any failure in a tailings or

waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

II. FINANCIAL CRITERIA

Criterion 9 - Financial surety arrangements shall be established by each mill operator to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. The amount of funds to be ensured by such surety arrangements shall be based on cost estimates in an approved plan for (1) decontamination and decommissioning of mill buildings and the milling site to levels which would allow unrestricted use of these areas upon decommissioning, and (2) the reclamation of tailings and/or waste disposal areas in accordance with technical criteria delineated in Section I of this Appendix. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The surety shall cover the payment of the charge for long-term surveillance required by Criterion 10. In establishing specific surety arrangements, the licensee's cost estimates shall take into account total capital costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the Commission will accept

financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or State agencies and/or local governing bodies for such decommissioning, decontamination, reclamation, and long-term site surveillance. The licensee's surety mechanism will be reviewed from time to time by the Commission (generally at the time of license renewal) to assure sufficient funds for completion of the reclamation plan if the work had to be performed by the regulatory authority. The amount of surety liability should change in accordance with the predicted cost of future reclamation. Factors affecting reclamation cost estimates include: inflation; increases in the amount of disturbed land; and decommissioning and reclamation that has been performed. This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended. Liability under the surety mechanism shall remain in effect until the reclamation program has been completed and approved. Financial surety arrangements generally acceptable to the Commission are:

(a) Surety bonds;

(b) Cash deposits;

(c) Certificates of deposit;

(d) Deposits of government securities;

(e) Letters or lines of credit; and

(f) Combinations of the above or such other types of arrangements as may be approved by the Commission.

Criterion 10 - A charge of $250,000 to cover the costs of long-term surveillance shall be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium or thorium mill license. If site surveillance requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in Criterion 12, variance in funding requirements may be specified by the Commission. The total charge to cover the costs of long-term surveillance shall be such that, with an assumed 1% annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The charge will be adjusted annually to recognize inflation. The inflation rate to be used is that indicated by the change in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics.

III. SITE AND BYPRODUCT MATERIAL OWNERSHIP

Criterion 11 -

A. These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

B. Any uranium or thorium milling license or tailings license shall contain such terms and conditions as the Commission determines necessary to assure that, prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

C. Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct material, shall be transferred to the United States or the State in which such land is located, at the option of such State. For licenses issued before November 8, 1981, the NRC will review an applicant's plans to effect arrangements to allow for transfer of site and tailings ownership prior to issuance of a license.

D. If the Commission determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State will not endanger the public health, safety, welfare, or environment, the Commission will permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

E. In the case of any uranium or thorium milling license in effect on November 8, 1981, the Commission may require, before the termination of such license, transfer of land and interests therein (including tailings) to the United States or a State in which such land is located at the option of such State as may be necessary to protect the public health, welfare, and the environment from any effects associated with byproduct material defined in this Part. In exercising this requirement, the

Commission will take into consideration the status of the ownership of such land and interests therein (including tailings) and the ability of the licensee to transfer title and custody thereof to the United States or a State. For licenses issued before November 8, 1981, the NRC will review an applicant's plans to effect arrangements to allow for transfer of site and tailings ownership prior to issuance of a license. Subsequent renewals shall not disqualify licensees otherwise eligible for such consideration under this criterion.

F. Material and land transferred to the United States or a State in accordance with this Criterion shall be transferred without cost to the United States or a State other than administrative and legal costs incurred in carrying out such transfer.

G. The provisions of this Part respecting transfer of title and custody to land and tailings and wastes shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material, as defined in this Part, the licensee shall enter into arrangements with the Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

IV. LONG-TERM SITE SURVEILLANCE

Criterion 12 - The final disposition of tailings or wastes at milling sites should be such that the need for ongoing active mainterance is not necessary to preserve isolation. As a minimum, annual site inspections

shall be conducted by site owners where tailings or wastes are stored to confirm the integrity of the stabilized tailings or waste systems and to determine the need, if any, for maintenance and/or monitoring. Results of the inspection shall be reported to the Commission within 60 days following each inspection. The Commission may require more frequent site inspections if, on the basis of a site-specific evaluation, such a need appears necessary due to the features of a particular tailings or waste disposal system.

13. § 70.14 of 10 CFR 70 is amended by deleting paragraph 70.14(b).

14. § 70.23 of 10 CFR 70 is amended by revising paragraph (a)(7) to read as follows:

§ 70.23 Requirements for the approval of applications.

* * * * *

(7) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, commercial waste disposal by land burial, or any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental value . Commencement of construction prior to such conclusion shall be grounds for denial to possess and use special nuclear material in such plant or facility.

* * * * *

15. § 30.11 of 10 CFR 30 is amended by deleting paragraph 30.11(b).

16. § 30.33 of 10 CFR 30 is amended by revising paragraph (a)(5) to read as follows:

§ 30.33 General requirements for issuance of specific licenses.

* * * * *

(5) In the case of an application for a license to receive and possess byproduct material for commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess byproduct material in such plant or facility.

17. § 150.3 of 10 CFR 150 is amended by revising paragraph 150.3(c) to read as follows:

§ 150.3. Definitions

* * * * *

(c) "Byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material; or (2) the tailings or wastes produced by the extraction

or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

18. § 150.15 of 10 CFR 150 is amended by adding a new paragraph (a)(7), to read as follows:

§ 150.15 Persons not exempt.

* * * * *

(a)(7) Until November 8, 1981, the receipt of title to, ownership of, receipt of, possession of, use of, transfer of, delivery of, import or export of the byproduct material as defined in § 150.3(c)(2) of this Part; Provided, however, that during this period any State may exercise any authority under State law respecting such material in the same manner, and to the same extent, as permitted before enactment of the Uranium Mill Tailings Radiation Control Act of 1978. In case of conflict between Federal and State requirements regarding a license, the Federal license requirements shall prevail unless the State requirements are more stringent than the Federal requirements.

19. 10 CFR 150 is amended by adding a new § 150.15a to read as follows:

§ 150.15a Continued Commission authority pertaining to byproduct material.

(a) Prior to the termination of any Agreement State license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the Commission shall have made a determination that all applicable standards and requirements pertaining to such material have been met.

(b) After November 8, 1981, the Commission reserves the authority to establish minimum standards regarding reclamation, long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance), and ownership of byproduct material as defined in § 150.3(c)(2) of this Part and of land used as a disposal site for such material. Such reserved authority includes:

(1) Authority to establish such terms and conditions as the Commission determines necessary to assure that, prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the licensee shall comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission; and with ownership requirements for such material and its disposal site as the Commission may establish;

(2) The authority to require that prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, that title to such byproduct material and its disposal site be transferred to the United States or the State in which such material and land is located, at the option of the State (provided such option is exercised prior to termination of the license);

(3) The authority to permit use of the surface or subsurface estates, or both, of the land transferred to the United States or a State pursuant to subparagraph (2) in a manner consistent with the provisions of the Uranium Mill Tailings Radiation

Control Act of 1978, provided that the Commission determines that such use would not endanger the public health, safety, welfare, or the environment;

(4) The authority to require, in the case of a license for any activity that produces such byproduct material (which license was in effect on November 8, 1981) transfer of land and material pursuant to subparagraph (2), taking into consideration the status of such material and land and interests therein, and the ability of the licensee to transfer title and custody thereof to the United States or a State;

(5) The authority to require the Secretary of the Department of Energy, other Federal agency, or State, whichever has custody of such property and materials, to undertake such monitoring, maintenance, and emergency measures as are necessary to protect the public health and safety and other actions as the Commission deems necessary to comply with the standards promulgated pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; and

(6) The authority to enter into arrangements as may be appropriate to assure Federal long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance of such disposal sites on land held in trust by the United States for any Indian tribe or land owned by an Indian tribe and subject to a restriction against alienation imposed by the United States.

20. 10 CFR 150 is amended by adding a new § 150.31 to read as follows:

§ 150.31 Requirements for Agreement State regulation of byproduct material.

After November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this Part, or of any activity which results in the production of such byproduct material, an Agreement State shall require--

(a) compliance with requirements established by the Commission pertaining to ownership of such byproduct material and disposal sites for such material; and

(b) compliance with standards which shall be adopted by the Agreement State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, including requirements and standards promulgated by the Commission and the Administrator of the Environmental Protection Agency pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; and

(c) procedures which--

(1) in the case of licenses under State law include--

(A) an opportunity, after public notice, for written comments and a public hearing, with a transcript,

(B) an opportunity for cross examination, and

(C) a written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(2) in the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(3) require for each license which has a significant impact on the human environment a written analysis (which shall be available to the public before the commencement of any such proceedings) of the impact of such license, including any activities conducted pursuant thereto, on the environment. Such analysis shall include--

(A) an assessment of the radiological and nonradiological impacts to the public health of the activities to be conducted pursuant to such license;

(B) an assessment of any impact on any waterway and groundwater resulting from such activities;

(C) consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(D) consideration of the long term impacts, including decommissioning, decontamination, and reclamation impacts associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined in § 150.3(c)(2) of this Part; and

(4) prohibit any major construction activity with respect to such material prior to complying with the provisions of paragraph (3).

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(d) No Agreement State shall be required under paragraph (c) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission.

21. 10 CFR 150 is amended to add § 150.32 to read as follows:

§ 150.32 Funds for reclamation or maintenance of byproduct material.

(a) The total amount of funds an Agreement State collects, pursuant to a license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, for reclamation or long term maintenance and monitoring of such material, shall, after November 8, 1981, be transferred to the United States if title and custody of such material and its disposal site is transferred to the United States upon termination of such license. Such funds include, but are not limited to, sums collected for long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance). Such funds do not, however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(b) If an Agreement State requires such payments for reclamation or long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance), the payments must, after November 8, 1981, be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.

22. § 170.2 of 10 CFR 170 is amended to read as follows:

§ 170.2 Scope.

Except for persons who apply for or hold the permits, licenses, or approvals exempted in § 170.11, the regulations in this part apply to a person who is an applicant for, or holder of, a specific byproduct material license issued pursuant to Parts 30 and 32-35 of this chapter, a specific source or byproduct material license issued pursuant to Part 40 of this chapter, a specific special nuclear material license issued pursuant to Part 70 of this chapter, a specific approval of spent fuel casks and shipping containers issued pursuant to Part 71 of this chapter, a specific request for approval of sealed sources and devices containing byproduct material, source material, or special nuclear material, or a production or utilization facility construction permit and operating license issued pursuant to Part 50 of this chapter, to routine safety and safeguards inspections of a licensed person, to a person who applies for approval of a reference standardized design of a nuclear steam supply system or balance of plant, for review of a facility site prior to the submission of an application for a construction permit, for review of a standardized spent fuel facility design, and for a special project review which the Commission completes or makes whether or not in conjunction with a license application on file or which may be filed.

23. § 170.3 of 10 CFR 170 is amended by revising paragraphs 170.3(a) and (c) to read as follows:

§ 170.3 Definitions.

As used in this part:

(a) "Byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material; or (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

* * * * *

(c) "Materials license" means a byproduct material license issued pursuant to Part 30 of this chapter, or a source or byproduct material license issued pursuant to Part 40 of this chapter, or a special nuclear material license issued pursuant to Part 70 of this chapter.

* * * * *

24. § 170.31 of 10 CFR 170 is amended to include a new category 4.D to read as follows:

§ 170.31 Schedule of fees for materials licenses and other regulatory services.

* * * * *

4.D	(1)	Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced in conjunction with milling operations.	Application..... 10,000 New License[4]..... 83,800 Renewal[4]..... 93,800 Amendment[3] Major[4]..... 20,800 Minor[4]..... 3,500 Administrative... 150
	(2)	Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes	Production scale activity: Application..... 7,000 New License[4]..... 52,600

	(i.e., byproduct material) produced in conjunction with heap-leaching operations.	Research and development scale activity: Application..... 2,000 New License[4]..... 14,800 Renewal[4].....[6]13,800 Amendment[3] Major[4].....[6] 4,200 Minor.....[6] 760 Administrative.[6] 150
(3)	Licenses specifically authorizing the receipt, possession, use, or ownership of tailings of wastes (i.e., byproduct material) produced in conjunction with in situ leaching operations.	Production scale activity: Application..... 2,500 New License[4]..... 16,900 Research and development scale activity: Application..... 850 New License[4]..... 5,000 Renewal[4]..... [6]4,800 Amendment[3] Major[4]..... [6]1,400 Minor..... [6] 250 Administrative. [6] 150

* * * * *

25. § 170.32 of 10 CFR 170 is amended to include a new category 4.D to read as follows:

§ 170.32 Schedule of fees for health and safety, and safeguards inspections for materials licenses.

* * * * *

4.D.	Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced by the extraction or concentration of uranium or thorium	Health and Safety.....1800 One Per Year

from any ore processed primarily

for its source material content.

* * * * *

The Commission finds that because the regulations supporting the general license must be effective immediately so as to prevent existing milling operations from being in technical violation of the Atomic Energy Act, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the amendments to 10 CFR §§ 40.1, 40.2a, 40.3, 40.4, 40.26, 150.3, and 150.15 immediately effective. The Commission notes in this regard that informal written comments on this matter were solicited and received from industry, environmental groups, and several States (these comments may be found in the Commission's public document room in a memorandum dated May 9, 1979, from the Executive Legal Director to the Commission entitled "Staff Response to the Commission Request for Further Information Regarding SECY-79-88 'Timing of Certain Requirements of the Uranium Mill Tailings Radiation Control Act of 1979'"). Comments on these amendments are invited, however, and the new regulations remain subject to further modifications in response to such comments.

(§§ 11e.(2), 81, 83, 84, 161b, 161x, 274; Pub. L. No. 83-703, 68 Stat. 948 et seq. (42 U.S.C. 2014e.(2), 2111, 2113, 2114, 2201b, 2201x, 2021)).

Dated at Washington, D.C. this _____ day of _____.

For the Nuclear Regulatory Commission.

_____

Samuel J. Chilk
Secretary of the Commission

NRC ISSUES PROPOSED SPECIFIC LICENSING REQUIREMENTS
FOR URANIUM MILL TAILINGS

The Nuclear Regulatory Commission is considering changing its regulations to specify licensing requirements for uranium and thorium mill tailings and to require that a final environmental impact assessment be completed by the NRC before construction of uranium mills and other fuel cycle facilities may begin.

The proposed rules were developed to incorporate recommendations of a "Draft Generic Environmental Impact Statement on Uranium Milling" issued by the NRC staff in April 1979--partly in response to a petition for rulemaking filed by the Natural Resources Defense Council--and to implement requirements of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978.

The proposals would (1) amend Part 40 of the Commission's regulations to establish technical, financial, ownership and longterm site surveillance requirements for tailings systems and mill sites; (2) amend Parts 30 and 70 to require that the NRC staff complete and document an environmental review before authorizing construction of facilities for fuel fabrication, scrap recovery, waste disposal by land burial, and other activities; (3) amend Part 150 to conform to the UMTRCA; and (4) revise Part 170 to establish the fees that NRC will charge for licensing services related to mill tailings.

Technical criteria in the proposed regulations on milling generally state that:

(1) Tailings areas should be located at remote sites to reduce potential population exposures to the maximum extent reasonably achievable;

(2) Tailings areas should be located at sites where disruption and dispersion by natural forces are eliminated or reduced to the maximum extent reasonably achievable;

(3) The prime option for tailings disposal is placement below grade, either in mines or specially excavated pits;

(4) If tailings are located above ground, specific siting and design criteria should be followed;

(5) Steps should be taken to reduce seepage of materials into groundwater to the maximum extent reasonably achievable;

(6) Sufficient earth cover (not less than three meters) should be placed over the tailings to reduce radon releases to a calculated value of less than two picocuries per square meter per second above natural background levels;

(7) A preoperational monitoring program should be conducted at least a year before any major site construction in order to provide complete baseline data on a milling site and its environs, and an operational monitoring program should be conducted throughout the construction and operation phases of the mill to demonstrate compliance with regulations, evaluate performance of control procedures, evaluate environmental impacts of operation and detect potential long-term effects; and

(8) Milling operations should be conducted so that all airborne effluent releases are kept as low as reasonably achievable.

Financial criteria being considered are:

(1) Financial surety arrangements must be established by each mill operator to ensure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of tailings or waste disposal areas. Financial surety arrangements acceptable to the Commission would include surety bonds, cash deposits, certificates of deposit, deposits of Government securities and letters of credit.

(2) Each mill operator must pay $250,000 to cover the costs of long-term site surveillance. The payment would have to be made to the general treasury of the United States or an appropriate State agency before the uranium or thorium mill license is terminated.

The proposed ownership criteria, which would be effective November 8, 1981, indicate that, in most cases, sites on which tailings are stored should be controlled through ownership and custody by the Federal government or the State where the land is located.

Long-term site surveillance criteria would require that the final disposition of tailings at milling sites be such that ongoing active maintenance is not necessary to preserve isolation of tailings or wastes after license termination. Site owners would have to conduct site inspections at least annually to determine the need for such maintenance or monitoring.

Written comments on the proposed regulations should be recieved within 60 days after publication of the proposed rule in the Federal Register. Comments should be addressed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

Single copies of the "Draft Generic Environmental Impact Statement on Uranium Milling" (NUREG-0511) are available by writing to the Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, division of Technical Information and Document Control.