

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

Title: AFFIRMATION/DISCUSSION AND VOTE

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Date: THURSDAY, JULY 14, 1988

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

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4 AFFIRMATION/DISCUSSION AND VOTE

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6 PUBLIC MEETING

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8 Nuclear Regulatory Commission
9 One White Flint North
10 Rockville, Maryland

11
12 Thursday, July 14, 1988
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14 The Commission met in open session, pursuant to
15 notice, at 3:30 p.m., the Honorable LANDO W. ZECH, Chairman of
16 the Commission, presiding.

17 COMMISSIONERS PRESENT:

18 LANDO W. ZECH, Chairman of the Commission
19 THOMAS M. ROBERTS, Member of the Commission
20 KENNETH CARR, Member of the Commission
21 KENNETH ROGERS, Member of the Commission
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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

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3 W. PARLER

4 A. BATES

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P R O C E E D I N G S

[3:30 p.m.]

CHAIRMAN ZECH: Good afternoon, ladies and gentlemen.

This is an affirmation session. We have three items to come before us this afternoon. Before I ask the Secretary to discuss the items, do any of my fellow Commissioners have any comments to make?

[No response.]

CHAIRMAN ZECH: If not, please proceed, Mr. Bates.

MR. BATES: Mr. Chairman, the first item today is SECY-88-170, Shoreham. The Commission is being asked to act on an order that responds to an Intervenor's motion for reconsideration of the June 11, 1987 Commission decision, CLI-87-05 in which the Commission partially denied Intervenor's request to reopen the record in the proceeding.

All Commissioners have approved an order which denies the motion for reconsideration.

Would you affirm your votes?

CHAIRMAN ZECH: Aye.

COMMISSIONER ROBERTS: Aye.

COMMISSIONER ROGERS: Aye.

COMMISSIONER CARR: Aye.

MR. BATES: The second item is SECY-88-174, a Licensing Board decision on operator license examination in the matter of Alfred J. Morabito. The Commission is being asked to

1 act on an order disposing of the Licensing Board decision in
2 the matter of Mr. Morabito.

3 All Commissioners have approved an order with a
4 modification by Commissioner Carr which vacates the
5 Licensing Board's decision and the Staff's underlying denial of
6 Mr. Morabito's license since the controversy is now moot.

7 Would you affirm your votes?

8 CHAIRMAN ZECH: Aye.

9 COMMISSIONER ROBERTS: Aye.

10 COMMISSIONER ROGERS: Aye.

11 COMMISSIONER CARR: Aye.

12 MR. BATES: The third item is SECY-87-298, final rule
13 for revision of 10 CFR Part 72 entitled "Licensing Requirements
14 for the Independent Storage of Spent Nuclear Fuel and High-
15 Level Radioactive Waste."

16 The Commission is being asked to approve amendments
17 to 10 CFR Part 72 to provide for licensing of the storage of
18 spent fuel and high-level waste in a monitored retrievable
19 storage facility.

20 All Commissioners approved amendments as we
21 circulated on June 8, 1988.

22 Would you affirm your votes?

23 CHAIRMAN ZECH: Aye.

24 COMMISSIONER ROBERTS: Aye.

25 COMMISSIONER ROGERS: Aye.

1 COMMISSIONER CARR: Aye.

2 CHAIRMAN ZECH: Is there anything else to come before
3 us?

4 MR. BATES: That's all I have.

5 CHAIRMAN ZECH: Thank you. We stand adjourned.

6 [Whereupon, at 3:32 o'clock, p.m., the Commission
7 meeting was adjourned.]

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CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events
of a meeting of the U.S. Nuclear Regulatory Commission
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TITLE OF MEETING: AFFIRMATION/DISCUSSION AND VOTE

PLACE OF MEETING: Washington, D.C.

DATE OF MEETING: THURSDAY, JULY, 14, 1988

were transcribed by me. I further certify that said
transcription is accurate and complete, to the best
of my ability, and that the transcript is a true and
accurate record of the foregoing events.

Marilyn Rations

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RULEMAKING ISSUE

(Affirmation)

December 8, 1987

SECY-87-298

For: The Commissioners

From: Victor Stello, Jr.
Executive Director for Operations

Subject: FINAL RULE FOR REVISION TO 10 CFR PART 72 ENTITLED, "LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE," AND CONFORMING AMENDMENTS TO 10 CFR PARTS 2, 19, 20, 21, 51, 70, 73, 75, and 150.

Purpose: To obtain Commission approval for publication in the Federal Register of a final rule which would amend 10 CFR Part 72 to include requirements for licensing spent fuel and high-level radioactive waste in monitored retrievable storage (MRS) installations, certain clarifying modifications resulting from licensing experience, and related conforming amendments.

Category: This paper covers a minor policy question requiring Commission approval. Resources estimate: Category 1, preliminary.

Background: SECY-85-374, dated November 25, 1985, and its supplement dated March 4, 1986, discussed the proposed rule dealing with this matter.

The rule covers the licensing of monitored retrievable storage installations (MRS), if Congress approves their construction in accordance with Subtitle C of the Nuclear Waste Policy Act of 1982 (NWPA). The staff analyzed the requirements of the MRS and proposed, through rulemaking, that the technical and procedural requirements of 10 CFR Part 72 are applicable to licensing of an MRS. Some additions to Part 72 were required to explicitly include the MRS and storage of solidified high-level radioactive waste (HLW). In addition, certain clarifying modifications resulting from licensing experience were also proposed.

The Department of Energy has experienced delays in getting Congressional approval to proceed with the MRS as a result of the lawsuit brought by the State of Tennessee and other actions associated with the NWPA.

Contact:
C.W. Nilsen
443-7917

Discussion:

On May 27, 1986, following Commission approval, the proposed revision to 10 CFR Part 72 relating to MRS licensing was published in the Federal Register (51 FR 19106) for comment. The comment period expired on August 25, 1986.

The NRC received 195 comment letters from utilities, engineering companies, State offices, environmental groups, private citizens, and a member of the U.S. House of Representatives. The comment letters from private citizens numbered about 145. (Some of these were signed by several individuals or were submitted on behalf of private business firms.) From the comment letters received, the staff identified 27 separate topics to which specific responses were directed. Comments were also received which addressed the original rule, not the proposed amendment.

In response to the comments, several changes have been made to the proposed rule. The majority of these changes are mainly clarifying in nature.

The five following specific topics are noted for your information. All issues and responses are addressed in the Supplementary Information section of the draft final rule.

- Backfitting

Several comments were received suggesting incorporation into Part 72 of the detailed reactor backfitting criteria in § 50.109 of 10 CFR Part 50. Although these storage facilities are not like reactors but are, for the most part, static by nature with very little need for design changes, the staff has revised the backfitting requirements of 10 CFR 72.42. The change is being made to conform § 72.42 more closely to § 50.109 as modified by the court decision in Union of Concerned Scientists, et al. v. U.S. Nuclear Regulatory Commission, et al. Nos. 85-1757 and 86-1219 (U.S.C.A.D.C. August 4, 1987).

Emergency Planning

The proposed amendment set forth explicit requirements for emergency plans which provided for limited emergency planning for off-site response in terms of coordination and communication. Some comments supported limited offsite response and others suggested greater offsite participation. No safety issues were presented to support expanding offsite participation. The staff has changed the Emergency Planning § 72.19 to incorporate the words used in the Commission's recently published for comment amendments to Parts 30, 40 and 70 Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees (52 FR 12921, April 20, 1987). This change does not affect the intent of the rule as was proposed.

State Participation

The Commission's response to comments concerning NRC interaction with States in the regulatory process states that, at the request of the MRS host State, the Commission will enter into discussions under Section 274i of the Atomic Energy Act, as amended, for the purpose of negotiating an agreement with the host State to perform inspections or other functions on a cooperative basis as the Commission deems appropriate.

This notice of intent for the Commission to enter into discussions with the MRS host state was added in response to the review by the Director, State, Local and Indian Tribe Programs, Office of Governmental and Public Affairs.

Second Hearing

A large number of the commenters responded to the request for comment on the opportunity for hearing upon completion of construction and prior to operation of the MRS and a Commission finding of completion of construction before MRS operation. Commenters were mainly concerned whether the construction of the MRS would be in accordance with the license. No information, such as new safety concerns, was presented in comments received that convinced the staff that the existing one stage licensing procedure for Part 72 type facilities was not adequate for an MRS. The licensing process of Part 72 supports one stage licensing as it requires that all information needed for the licensing action be available and complete before a license is issued, i.e., final design, quality assurance/control procedures, operator training procedures, operating technical specifications, etc. As to the adequacy of construction, the staff believes that the details of construction of a Part 72 facility are, unlike power reactors, sufficiently simple and straightforward that there is no need to require an applicant to establish or "prove" conformance of the as-built facility with the application prior to receipt of spent fuel. Of course, NRC would, as in the case of reactors, audit construction progress and, in the event some problems were found, existing regulations contain sufficient authority to enable the Commission to take any affirmative enforcement action that may be needed. The updating of the SAR (§ 72.50(a)) and the NRC inspection program, including the provision for establishing an NRC resident inspection program if desired (§ 72.56(c)(3)) would both provide a source of information for corrective action, if needed. Accordingly, the licensing procedures will remain as proposed with one step licensing. The rule was revised, however, to remove the discretionary second hearing because, since the applicant would already be authorized to store fuel, NRC would not, strictly speaking, be authorized to hold a second hearing except upon initiation of enforcement action to modify or revoke the outstanding authorization.

Legal Status of Construction Ban Regulation

In a recent decision (Natural Resources Defense Council, Inc. v. U.S. E.P.A., 822 F.2d 104, June 30, 1987) the U.S. Court of Appeals for the District of Columbia Circuit held that EPA lacks authority under the Clean Water Act and the National Environmental Policy Act (NEPA) to promulgate a regulation banning the construction of new sources pending issuance of a new source NPDES (National Pollution Discharge Elimination System) permit. Noting that the Clean Water Act regulates the discharge of pollutants but does not regulate the construction of sources, that the private construction of sources does not constitute Federal action, that Congress authorized EPA to issue new source discharge permits but did not authorize EPA to restrict construction prior to the issuance of such permits, that NEPA review is only triggered by a major Federal action, and that Congress has specifically declared EPA issuance of a new source discharge permit to be a major Federal action for the purposes of NEPA, the Court concluded that EPA's construction ban regulation was directly contrary to the clear intent of Congress and therefore not authorized by the Clean Water Act. The Court also ruled that "NEPA, as a procedural device does not work a broadening of the agency's substantive powers." (822 F.2d 104 at 129) The ruling in this case raises the question of the legality of the construction ban provisions¹ found in various parts of the Commission's regulations, including § 72.31(b) of Part 72 (see Enclosure 1, p. 62). Because this issue must also be resolved for Parts 30, 70 of the Commission's regulations (see, e.g., §§ 30.33(a)(c), 40.32(e) and 70.23(a)(7)), the staff has made no change in the construction ban provision in this final rule. Instead, the staff plans to address the issue generically in a separate rulemaking proceeding.

Having considered all public comments received, the staff recommends that a final rule be promulgated which would allow for the licensing of Department of Energy Monitored Retrievable Storage facilities.

The Office of the General Counsel has reviewed the draft final rule and has no legal objection.

Recommendations: That the Commission:

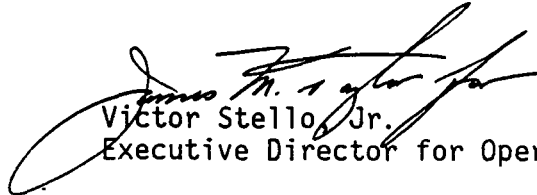
1. Approve for publication the amendments to 10 CFR Part 72 and other conforming amendments. (Enclosure 1).

¹NRC's construction ban regulations warn license applicants that commencement of construction prior to the requisite environmental findings may be grounds for denial of the license. The EPA regulation which the Court struck down is similar (see, 40 CFR § 122.29(c), especially paragraph (c)(5)).

2. Certify that this rule will not have a significant economic impact on a substantial number of small entities in order to satisfy requirements of the Regulatory Flexibility Act, 5 U.S.C 605(b).
3. Approve the Finding of No Significant Environmental Impact contained in the Federal Register notice of final rulemaking.
4. Note:
 - (a) That amendments to Parts 2, 19, 20, 21, 51, 70, 72, 73, 75, and 150 will be published in the Federal Register and will become effective 30 days after publication.
 - (b) That the ACRS has reviewed the rule change (Enclosure 2).
 - (c) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, and the Subcommittee on Energy and Power of the House Committee on Energy and Commerce will be notified of the Commission's action by letter such as Enclosure 3.
 - (d) A copy of the Commission's Finding of No Significant Environmental Impact and a copy of NUREG-1092, "Environmental Assessment for 10 CFR Part 72 Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste," referenced therein are available for inspection in the Commission's Public Document Room.
 - (e) A copy of the Commission's Regulatory Flexibility Act certification will be forwarded to the Chief Counsel for Advocacy, SBA, by the Division of Rules and Records, ARM.
 - (f) That the final rule contains information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.). These requirements were approved by the Office of Management and Budget approval number 3150-0132.
 - (g) The Federal Register notice of final rulemaking will be distributed by ARM to affected licensees and other interested parties, including the 195 commenters.
 - (h) That a public announcement (Enclosure 4) will be issued when the final rule is filed with the Office of the Federal Register.

- (i) That the staff recommends this Commission paper be placed in the Commission's Public Document Room.
- (j) That a Regulatory Analysis has been performed and will be placed in the Commission's Public Document Room (Enclosure 5).

Scheduling: For early consideration at an open session.


Victor Stello, Jr.
Executive Director for Operations

Enclosures:

- 1. Federal Register Notice of Final Rule
- 2. ACRS Letter
- 3. Congressional Letter
- 4. Public Announcement
- 5. Regulatory Analysis

Commissioners' comments or consent should be provided directly to the Office of the Secretary by c.o.b. Wednesday, December 30, 1987.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Monday, December 21, 1987, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for affirmation at an Open Meeting during the Week of January 4, 1988. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific date and time.

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NUCLEAR REGULATORY COMMISSION

10 CFR Parts 2, 19, 20, 21, 51, 70, 72, 73, 75 and 150

Licensing Requirements for the Independent Storage of Spent
Nuclear Fuel and High-Level Radioactive Waste

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Waste Policy Act of 1982 (NWPAA) requires that monitored retrievable storage facilities (MRS) for spent nuclear fuel and high-level radioactive waste (HLW) be subject to licensing by the Nuclear Regulatory Commission (NRC), if Congress approves their construction. The NRC is adding language to its regulations in 10 CFR Part 72 to provide for licensing the storage of spent nuclear fuel and HLW in an MRS. The Commission intends to have the appropriate regulation to fulfill the requirements of the NWPAA in place in a timely manner. The rule would also clarify certain issues that have arisen since Part 72 was made effective on November 28, 1980 and incorporate other changes resulting from public comments received.

EFFECTIVE DATE: [30 days following publication in the Federal Register].

ADDRESSES: Copies of NUREG-0575, NUREG-1092, and NUREG-1140 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also

available from the National Technical Information Service, 5282 Port Royal Road, Springfield, VA 22161. A copy of each NUREG is also available for public inspection and/or copying at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Keith G. Steyer or C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301)443-7739 or 443-7917, respectively.

SUPPLEMENTARY INFORMATION:

On May 27, 1986, following Commission approval, the proposed revision to 10 CFR Part 72 relating to MRS licensing was published in the Federal Register (51 FR 19106) for comment. The comment period expired on August 25, 1986.

The NRC received 195 comment letters from utilities, engineering companies, State offices, environmental groups, private citizens, and a member of the U.S. House of Representatives. The comment letters from private citizens numbered about 145. (Some of these were signed by several individuals or were submitted on behalf of private business firms.) From the comment letters received, the staff identified 27 separate topics to which specific responses were directed. Comments were also received which addressed the original rule, not the proposed amendment. In response to the comments, several changes have been made to the proposed rule. The majority of these changes are mainly clarifying in nature.

A compilation of the issues raised as a result of public comment and the accompanying Commission response follow:

1. Backfitting

Comment:

Several commenters indicated that the proposed rule should incorporate the sense of the reactor backfitting rule set out in 10 CFR 50.109.

Response:

Although these storage facilities are not like reactors but are, for the most part, static by nature with very little need for design changes, the staff has revised the backfitting requirements of 10 CFR 72.42. The change is being made to conform § 72.42 more closely to § 50.109 as modified by the court decision in Union of Concerned Scientists, et al. v. U.S. Nuclear Regulatory Commission, et al. Nos. 85-1757 and 86-1219 (U.S.C.A.D.C. August 4, 1987).

2. Opportunity for Hearing Prior to the First Receipt of Spent Fuel or High-Level Radioactive Waste (HLW).

Comment:

A new proposed §72.34(c) was added to 10 CFR Part 72 specifically providing that the Commission may, upon its own initiative, issue a notice of opportunity for hearing prior to the first receipt of spent fuel or high-level radioactive waste at an MRS if it finds this to be in the public interest. In the supplementary

information in the May 27, 1986 Proposed Rule the Commission indicated its own considerations on this topic and expressed particular interest in receiving public comment on (1) the need to make a finding before MRS operation that construction conforms to the license application, (2) provisions for second stage hearing rights to address specific new issues which could not have been litigated at the first stage and/or new information which has been revealed since issuance of the license, and (3) the format of the hearing, if held. Of the comment letters that addressed these points, some expressed no preference, some favored the provisions, some thought the provisions were unnecessary.

The principal reasons given by proponents of these provisions are that the public will have more confidence that the MRS will be operated safely and that there should be a clear opportunity to examine new issues which could be raised. Other comments of proponents were that the Department of Energy has had poor public performance in the past, that the degree of hazard is similar to nuclear power reactors which require a two-stage process, and that the opportunity for a second hearing could be an appropriate time to examine technical/financial information. Additional comments suggested that the rule require a second mandatory hearing and that funding be provided for nonprofit groups to participate in a second hearing.

On the topic of a finding it was suggested that (1) criteria be set forth for any finding the Commission may make, and (2) the NRC inspections should certify quality assurance and completeness of construction in an inspection report prior to initiation of operation. One comment suggested that start-up of the MRS should be linked to the repository authorization as an issue at a second hearing.

The principal reasons given by those opposed to the new provisions for a second hearing were that (1) it would cause unnecessary delay, (2) the Commission's regulations in 10 CFR Part 2 were sufficient to examine any new issues, (3) the NRC's normal systematic inspections are adequate to assure that construction was proper, (4) the nature of the MRS is such that all issues could be covered by the opportunity for public review prior to issuing a license and starting construction, and (5) the backfitting provision (§72.42) provides additional assurance that significant issues may be raised by staff after the license is issued. Other reasons offered in objection to the new provisions were that (6) there was no basic difference between an MRS and an Independent Spent Fuel Storage Installation (ISFSI), (7) the small amount of solidified high-level waste which could be received could not justify any change in procedure from an ISFSI, and (8) the Safety Analysis Report (SAR) update procedure will assure that any new issue will be known and understood by NRC staff.

Response:

The Commission specifically added the new provision and requested comments in order to obtain as complete an understanding as possible of whether or not any benefits would accrue to the public from such a procedure. This was done with full knowledge that the Atomic Energy Act of 1954 as amended only requires one hearing and that under the procedures in 10 CFR Part 2 the opportunity always exists for any member of the public to bring any new issues to the Commission's attention.

In the comments received from the public there was no indication that there were likely to be any new safety issues brought forward which could not have been fully addressed on the occasion of the hearing held prior to issuance of the license. The licensing process of Part 72 supports one stage licensing as it requires that all information needed for the licensing action be available and complete before a license is issued, i.e., final design, quality assurance/control procedures, operator training procedures, operating technical specifications, etc. Unlike a reactor license where a construction permit is issued prior to final design, an MRS application for license contains a final and complete design and therefore one stage licensing is achievable. As to conformance of construction with the application and license, the Commission believes that, unlike reactors, construction of Part 72 type facilities will be simple and straight-forward. Accordingly, in the Commission's judgment, there will be no need, as part of the safety review prior

to license issuance, to require an applicant to "prove" conformance of the as-built facility with the application. NRC would audit construction progress and, in the event some problems were found, enforcement action could be taken to correct them and, if necessary, halt the receipt of spent fuel until they were corrected. In this regard, § 72.56(c)(3) provides for establishing an NRC resident inspection program if warranted.

3. Interaction with States

Comment:

Comments were received concerning providing of information to State and local governments and their interaction in the licensing process with DOE and the Commission.

Response:

Under § 72.310 of the proposed rule, the Governor and legislature of any State in which a monitored retrievable storage installation may be located and the governing body of any affected Indian tribe will be provided timely and complete information regarding determinations or plans made by the Commission with respect to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility. In response to the comment, the Commission will change § 72.310 "Provision of MRS Information" to require that the above information will also be provided to the

chief executive of the local municipality and to the Governors of any contiguous States.

Participation by persons, including States, in license reviews is as provided for in 10 CFR Part 2, Subpart G. In addition, at the request of the MRS host State, the Commission will enter into discussions under Section 274i of the Atomic Energy Act, as amended, with the host State for the purpose of negotiating an agreement to perform inspections or other functions on a cooperative basis as the Commission deems appropriate.

4. High Burn-Up Fuel

Comment:

In response to a 1980 petition for rulemaking, the Commission agreed (51 FR 23233, June 26, 1986) to prepare an environmental assessment on high burn-up fuel. The Commission's response concerning impacts of high burn-up fuel should be provided.

Response:

The matter of high burn-up fuel is being addressed in a separate action; issuance by the NRC of an environmental assessment addressing this subject is expected in late 1987. Therefore, the Commission will not address the issue at this time, but will take action as appropriate when the environmental assessment is completed.

5. Emergency Planning

Comment:

As discussed in supplementary information to the proposed revisions to 10 CFR Part 72 the rule was rewritten to set forth explicit requirements appropriate to an ISFSI or an MRS, rather than refer to Appendix E to 10 CFR Part 50, which is specific to nuclear power reactors. Responders commented on this change. Several thought that there should be a wider dissemination of the emergency plan which an applicant would have to prepare pursuant to the rewritten § 72.19, as well as a comment period longer than the specific 60 days. Another responder thought that 60 days was adequate. Other comments were that (1) sabotage of casks and terrorism, sabotage and military attack scenarios should be considered in an emergency plan; (2) a fully developed and tested offsite emergency plan should be developed, (3) the new version of § 72.19 implies a need for offsite protective actions which is incorrect, (4) the supplementary information which will accompany the issuance of the final rule should discuss worldwide experience and previous reviews and studies as support for the new emergency planning provisions, and (5) the emergency plan should continue to be the same as that for nuclear power reactors.

Response:

The basic concept of emergency planning in § 72.19 has not been changed. None of the respondents provided any additional information to the staff or questioned the staff analyses such

as to change the basis for the staff's approach to emergency planning for an ISFSI or an MRS. Moreover, in view of the relatively passive nature of facilities for the receipt, handling and storage of spent fuel and high-level radioactive waste, as compared to operating power reactors, emergency plans for ISFSI and MRS need not be equivalent to emergency plans for reactors. The text of § 72.19 has been replaced with the appropriate parts of the Commission's proposed amendments to Parts 30, 40 and 70 Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees (52 FR 12921, April 20, 1987) recently published for comment. This format change provides for consistency in regulatory language but does not change the approach which requires onsite emergency planning with provisions for offsite emergency response in terms of coordination and communication with offsite authorities and the public.

Sabotage, terrorism, and military attacks are not treated as emergency preparedness issues. The Commission's established practice with respect to dangers of enemy action is that the protection of the United States against hostile enemy acts is a responsibility of the nation's defense establishment and the various agencies having internal security functions. Acts other than military are covered under a planning system included in Subpart H of Part 72, which contains requirements respecting physical security and safeguards contingency plans that are specifically designed to preclude the occurrence of such acts.

The primary purpose of an emergency response plan is to prescribe measures to be taken to mitigate the effects of accidental releases of radioactivity, irrespective of their cause. Thus, in the unlikely event that there should be an accidental release of radioactivity by reason of an act of terrorism or an act of sabotage, protective actions would be taken as prescribed in the emergency response plan, just as they would be taken in the case of accidental release arriving from other causes.

6. Department of Energy as Licensee for the MRS

Comment:

Respondents commented on several aspects of the licensing of the Department of Energy for the MRS. One comment requested that in every instance in which there would be a difference in requirement between the Department and other licensees, that that difference should be specifically defined in Part 72.

Other commenters pointed out that the funding for the MRS was from the Nuclear Waste Fund as stipulated in the NWPA and, therefore, the Department should be required, through Part 72, to show how these funds will be adequate for operation and decommissioning. A further comment questioned the Department's authority pursuant both to Part 72 and its own orders to delegate quality assurance program responsibilities to its contractor(s). One commenter suggested that Part 72 should permit revocation or suspension of the Department's license for the MRS since the NRC could not impose civil penalties for license violations.

Response:

As discussed in the supplementary information to the proposed revisions to Part 72, the Department of Energy is exempted from certain financial reports, creditor information and financial plans for decommissioning. As pointed out in the comment above, funding for the MRS will be from the Nuclear Waste Fund, separately accountable from public funds. Consistent with the principle of full cost recovery in Section 302 of the NWPA (42 U.S.C. 10222) this fund will provide all financial resources for the MRS i.e., licensing, construction, operation and decommissioning. Since DOE is a federal agency and the status of the NWPA waste fund is reported to and reviewed by the Congress yearly, the Commission believes that Congress will assure that adequate funds are available and appropriated for DOE to carry out its statutory responsibility. Under these circumstances additional NRC oversight is unnecessary and inappropriate.

As to possible conflicts in the licensing and regulatory process between orders and procedures of the Department of Energy and NRC requirements, two government agencies, the commenter provided no specifics and the Commission is not aware of any such conflict. The Department will be provided the same latitude as any other licensee pursuant to § 72.101 wherein it is stated that "the licensee may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program."

No exemptions from the provisions of §72.41, "Modification, revocation, and suspension of licenses", and §72.57, "Violation" are shown for the Department. Therefore, the Commission could impose penalties on the Department if there were sufficient justification. The Commission knows of no other differences between the Department and other licensees for which a change in Part 72 is warranted. (The commenters recommended no specific changes in this area.)

7. Minimum Decay Period (Age) for Receipt of Spent Fuel

Comment:

It was noted that there is a seeming discrepancy between the minimum decay period (age) of spent fuel as specified in §72.2 (one year) and a reference to the environmental analysis in NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" (five-year decay assumed).

Response:

The minimum one year decay period in §72.2 is based on assuring the decay of radioisotopes having half-lives on the order of a few days or less. In actuality, the decay periods are likely to be much longer than one year. Accordingly, the NUREG-1140 analyses were based on the more realistic, but still conservative, assumption that five or more years of decay would have taken place for the spent fuel for which an accident in a dry cask was assumed. This is not a discrepancy since different

purposes are being served in each instance. In choosing a nominal decay period of 10 years and a five-year minimum decay period in the design parameters for the MRS the Department of Energy (DOE) is merely exercising its own prerogative to use a longer decay criterion for purposes of fuel receipt. Selection of a five-year minimum decay period also reflects DOE's understanding that the spent fuel to be received at the MRS will already have decayed for periods of time likely to be even much greater than five years at individual power reactor sites. The original analysis for Part 72 was based on one year-decay.

8. Physical Security Plan

Comment:

A few commenters were concerned about the proposed change in the requirements of the physical security plan for the Department of Energy in that the Department must provide a certification that it will provide at the MRS "such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security." The concerns were that this was an added requirement imposed only on the Department and that there was no definition of what a "comparable" DOE facility would consist of.

Response:

For all licensees physical security plans are designed for two purposes: 1) to protect against sabotage and 2) to promote the common defense and security. The change in the requirements of

the physical security plan is intended to be consistent with 10 CFR Part 60, "Disposal of High-Level Radioactive Wastes in Geologic Repositories," wherein it is recognized that the Department already carries these responsibilities for all of its facilities.

The Department in carrying out its responsibility to promote the common defense and security of all its facilities can best identify the surface DOE facilities to which the MRS is most comparable for purposes of physical security without the unnecessary burden of an NRC definition of "Comparable."

Comparability in this context is a function of the kinds and quantities of nuclear materials held at the facilities and the potential consequences of theft or sabotage. However, the NRC staff believes that the Receiving Basin for Off-Site Fuel at the Savannah River Plant may be an appropriately comparable facility.

9. Continuous Cask Monitoring Provision

Comment:

Several commenters pointed out that the wording of the provision in § 72.92(h)(4) for monitoring of storage confinement systems was inconsistent with Section 141(b)(1)(B) of the NWPA wherein it is required that an MRS facility shall be designed to permit continuous monitoring. Another commenter suggested that the State should participate in the monitoring.

Response:

The difference in wording between Section 141(b)(1)(B) of the NWPA and § 72.92(h)(4) was inadvertent. The staff has corrected the wording of § 72.92(h)(4) in the final rule to agree with the NWPA. As to State participation in monitoring, this is a matter to be resolved with the Department or as indicated in Response Number 3.

10. Inspection and/or Monitoring**Comment:**

In §72.33(c)(3) the words "inspection and monitoring" have been changed to "inspection or monitoring."

Response:

The proposed change serves no useful purpose. The degree and method of inspection and monitoring will be dependent upon design and operational limits for specific cases. The words "inspection and monitoring" will be reinstated.

11. Foreign Fuel**Comment:**

One commenter expressed objection to the processing and storage of foreign spent fuel or HLW at the MRS and stated that it should be specifically prohibited.

Response:

The reference to foreign fuel in § 72.54 of the proposed rule was limited to material transfer report requirements and was not intended either to restrict or to permit such processing or storage. Section 302(a) of the NHPA does specify only "high-level radioactive waste, or spent nuclear fuel of domestic origin" and therefore the reference to foreign fuel at an MRS will be removed.

12. Tornado Missile

Comment:

Commenters have disagreed with the deletion of the exemption regarding protection against tornado missile impact, that is, as expressed in the existing rule, "...An ISFSI need not be protected from tornado missiles...". Another commenter who favors the deletion concerning protection from tornado missiles would also have the restriction limiting its scope to "...structures, systems, and components important to safety" deleted.

Response:

The explanation of the exemption for tornado missiles, set out in the preamble of the existing rule (45 FR 74693, November 12, 1980) states that radionuclide releases from spent fuel which has undergone at least a year of radioactive decay would not be significant in the event of tornado missile impact, citing an accident evaluation from NUREG-0575 "Generic Environmental

Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuels" with gaseous radionuclide releases from water pool storage. With the continuing development of dry storage technologies, which include metal casks, concrete silos, dry wells, and air-cooled vaults, the Commission decided the designs should take into account tornado missile protection, unless it is shown that tornado missiles will not have any effect on structures, systems and components important to safety. While offsite gaseous release impacts, from fuel rod rupture, due to a tornado missile incident would remain insignificant, it is important to assure that design criteria for dry storage designs continue to address maintaining confinement of particulate material. All safety reviews for storage licensed under Part 72, both water pool and dry storage, have evaluated designs with respect to tornado missile impact. Since safety considerations drive our concern with respect to the tornado missile phenomenon, it is not necessary to expand that concern beyond "structures, systems, and components important to safety."

13. Use of Part 50 Criteria

Comment:

To expedite the licensing process for facilities proposed on sites which currently possess a 10 CFR Part 50 license, it was proposed that the applicable siting evaluation factors and general design criteria which have been reviewed and approved by the NRC for the Part 50 license be directly adopted for the Part 72 facility without additional review, hearings or

approvals. Adequate reviews and approvals have been completed, and any change to those previously approved should be treated as a backfit.

Response:

The storage of an increased amount of spent fuel on a reactor site, over that covered under an existing Part 50 license, requires staff action through safety and environmental reviews. In taking this action to authorize additional storage capacity for spent fuel the staff will apply criteria from Part 50 or Part 72, depending on the type of licensing action being sought. Licensing action for an ISFSI would use criteria contained in Part 72 and Part 50 would be used for amending an existing reactor license. Storage of spent fuel on a reactor site outside of an existing reactor basin is already regulated under the criteria of Part 72 and these criteria have been used in reviewing applications for additional fuel storage at reactor sites.

14. Cladding

Comment:

Opposition is expressed to any lowering of fuel cladding protection, as provided for in the existing § 72.72(h)(1).

Response:

The revision of this provision (i.e., § 72.92(h)(1)) addressed confinement of fuel material, which is the purpose of protecting the fuel cladding. The revised provision specifically provides

for additional alternative means of accomplishing this objective. This serves to enhance confinement protection capability rather than diminish it.

15. Rod Consolidation

Comment:

Comments were received concerning the Department of Energy's plan to consolidate rods from spent fuel assemblies into sealed packages. One commenter suggested inserting the word "chemically" after the word "separated" in the definition of spent nuclear fuel. Another comment suggested that a separate environmental impact statement be prepared on rod consolidation. It was suggested that the NRC give rod consolidation special consideration and that it is not clear at present what requirements the NRC will use for rod consolidation.

Response:

Rod consolidation is the most elaborate operation contemplated for the MRS. The Department of Energy in its proposal and elsewhere has indicated its intention to fully develop the rod consolidation process for installation and operation. The rod consolidation system must meet all applicable portions of the general design criteria. There is no precedent for the preparation of an environmental impact statement in connection with a single system of a facility for which a complete environmental impact statement will be prepared. The aspect of rod consolidation will be covered in that statement, as well as in the safety

review and evaluation by the staff in connection with the application for an MRS. The NRC does expect to be kept informed by the Department of its developmental activities prior to receipt of an application.

The insertion of the word "chemically" as suggested has been accepted by the staff for the final rule.

16. Accident Analysis For Two Barriers

Comment:

A comment was received regarding engineered barriers such as canisters, "...the design basis accident scenario (i.e., release of gap activity from all fuel contained in a dry cask) should be revised to account for cases in which canister or other engineered barriers are incorporated."

Response:

Most cask designs do not incorporate canistering of spent fuel assemblies. Therefore, for purposes of this rulemaking, choice of a lesser accident scenario assuming canistering is not appropriate for a bounding analysis. In a safety review involving a specific design, which incorporates an additional engineered barrier, the design basis accident scenario should, of course, consider this addition in the review analysis.

17. Records

Comment:

Comments were received concerning archiving of records; by whom and how long?

Response:

The proposed rule is consistent with current NRC policy concerning retention periods for records. The specific details of their physical storage is action taken at time of licensing.

18. Operator Safety

Comment:

Comments were received concerning design for ALARA.

Response:

The licensee is responsible for meeting the requirements of 10 CFR Part 20 "Standards for Protection Against Radiation," and all its provisions for maintaining ALARA. In addition § 72.15 Contents of Application: Technical Information requires applicants for a license to supply information for maintaining ALARA for occupational exposure.

19. MRS collocation with Waste Repository

Comment:

Commenter suggested expanding limitation for collocation with repository to include other facilities.

Response:

The collocation restrictions in § 72.75 are specifically included in order to comply with Section 141(g) of the NWPA (42 U.S.C. 10161(g).) (See also Section 135(a)(2).)

20. MRS collocation with other nuclear facilities

Comment:

Commenter was concerned about other nuclear facilities that are not licensed.

Response:

The licensing process considers all activities and facilities, licensed or unlicensed, that could increase the probability or consequences of safety significant events at licensed facilities.

21. High Level Liquid Waste

Comment

Several commenters were concerned about the storage of liquid High-Level Waste (HLW).

Response:

The MRS will be designed and licensed for the storage of irradiated fuel and solidified waste from the processing of fuel.

The MRS will not receive liquid HLW and the form of the solid waste stored will be that which is compatible with the requirements for permanent disposal in a repository.

Any liquid wastes generated at the MRS will be handled in accordance with existing regulations.

22. Quality Assurance - Quality Control

Comment:

Comments were associated with the apparent difference between the quality assurance criteria proposed and the previous quality assurance criteria.

Response:

The proposed rule quality assurance subpart was written to incorporate the previously referenced 10 CFR Part 50 Appendix B quality assurance criteria specifically into Part 72. There was no intent to change the criteria. Minor conforming changes have been made in the final rule.

23. Criticality

Comment:

A comment was received concerning the removal of the requirement for verifying continued efficacy of solid neutron poisons.

Response:

Several changes have been made to the criticality section of the final rule to make it correspond to other Parts of the Commission's regulations and standard criticality review practices. Verification of solid neutron poisons has been retained. Double contingency criteria and requirements for

criticality monitors have been added. It is not the intent of the revision concerning criticality monitors to require monitors in the open areas where loaded casks are positioned for storage as that system is static. Monitors are required where the systems are dynamic.

24. MRS Storage Capacity

Comment:

Commenters questioned the MRS storage capacity as stated in the proposed rule in §§ 72.1 and 72.75.

Response:

In the proposed rule MRS storage capacity values are based on the NHPA, as approved by Congress. (See Section 135 (a)(1)(A), 42 U.S.C. 10155(a)(1)(A) and Section 114(d), 42 U.S.C. 10134(d).)

25. The Term - "Temporary Storage"

Comment:

Comments objected to the removal of the term "Temporary Storage" from § 72.3 Definitions and the removal of the word "temporary" from § 72.2 Scope.

Response:

In making these changes, the Commission does not intend to change the scope of Part 72 which relates to the licensing of ISFSI and MRS for the purpose of storage only. Part 72 does not nor

is it intended to cover permanent disposal. Accordingly, use of the word "temporary" in the rule is non-definitive and unnecessary.

26. MRS Rule Making

Comment:

Many commenters (approximately 150), through the use of form letters or paraphrasing, did not want the MRS in Tennessee, did not support any form of rulemaking until Congress had authorized the MRS through funding appropriation, and made reference to "license it twice."

Response:

- The Commission's regulations are silent on location of an MRS or authorization for MRS construction as a result of Congressional action. The regulations are promulgated to permit the Commission to carry out its mandate of providing for the health and safety of the public if an MRS is built. The "license it twice" concept is addressed in Response Number 2.

27. Increase of Licensing Period for the MRS

Comment:

Comments questioned the Commission's basis, as described in the statement of considerations for the proposed changes to Part 72, for providing a longer license term for an MRS (40 years) than for an ISFSI (20 years). Comments also included (1) the term should start with the receipt of spent fuel, and (2) ISFSI

should also have a 40-year license term. Further explanation of the basis for the license term was also requested. All of the commenters seemed to concentrate on a license for the spent fuel rather than a license covering a facility for storage.

Response:

An MRS as described in the NWPA is intended for storage, but not necessarily for the same fuel since fuel will continually be moved in and out over the life of the facility in concert with operation of a repository. A longer license term is therefore appropriate for an MRS considering the purpose and mode of operation of the facility.

- In contrast to the MRS, the spent fuel stored in an ISFSI at reactor sites or elsewhere will be collected until the Department of Energy waste disposal system is ready for its receipt; the current schedule indicates that this transfer from reactor sites to an MRS could begin to occur within about 10 years.
- The Commission has in place a license renewal process for ISFSI storage which provides an opportunity for extension of the 20-year license term, with staff reevaluation of safety and environmental aspects of the operation. In any event the systematic inspection program of the Commission wherein the licensee's adherence to all license conditions and technical specifications is continually being examined applies to both MRS and ISFSI storage over the entire period of a license. The

Commission will provide a 40-year license term for an MRS in the final rule.

Having considered all of the above, the Commission has determined that a final rule be promulgated. The text of the final rule has some changes as noted from the proposed rule.

Finding of No Significant Environmental Impact

The Commission has determined not to prepare an environmental impact statement for the proposed amendments to 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

NUREG-0575, "Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel," August 1979, was issued in support of the final rule promulgating 10 CFR Part 72. "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation ISFSI)," which became effective November 28, 1980. On January 7, 1983 the Nuclear Waste Policy Act of 1982 was signed into law. A major provision of this law is that the Department of Energy (DOE) shall complete a detailed study of the need for and feasibility of, and submit to Congress a proposal for, the construction of one or more monitored retrievable storage facilities (MRS) for high-level radioactive waste and spent nuclear fuel. If Congress approves the construction of an MRS, DOE would be required to obtain a license from the Commission for the facility. The NRC staff has concluded that although existing 10 CFR Part 72 is generally applicable to the design, construction, operation, and decommissioning of MRS, additions are necessary to explicitly cover

the licensing of spent nuclear fuel and high-level radioactive waste storage in an MRS. In August 1984, the NRC published an environmental assessment for this proposed revision of Part 72, NUREG-1092, "Environmental Assessment for 10 CFR Part 72, Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste." NUREG-1092 discusses the major issues of the rule and the potential impact on the environment. The findings of the environmental assessment are "(1) past experience with water pool storage of spent fuel establishes the technology for long-term storage of spent fuel without affecting the health and safety of the public, (2) the proposed rulemaking to include the criteria of 10 CFR Part 72 for storing spent nuclear fuel and high-level radioactive waste does not significantly affect the environment, (3) solid high-level waste is comparable to spent fuel in its heat generation and in its radioactive material content on a per metric ton basis, and (4) knowledge of material degradation mechanisms under dry storage conditions and the ability to institute repairs in a reasonable manner without endangering the health [and safety] of the public shows dry storage technology options do not significantly impact the environment." The assessment concludes that, among other things, there are no significant environmental impacts as a result of promulgation of these revisions of 10 CFR Part 72.

Based on the above assessment the Commission concludes that the rulemaking action will not have a significant incremental environmental impact on the quality of the human environment.

Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget approval number 3150-0132.

Regulatory Analysis

The NRC has prepared a regulatory analysis on this final rule. The analysis examines the benefits and alternatives considered by the NRC. The analysis is available for inspection in the NRC Public Document Room, 1717 H Street NW., Washington, DC. Single copies of the analysis may be obtained from C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-7663).

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, (5 U.S.C 605(b)), the Commission certifies that this rule will not have a significant economic impact on a substantial number of small entities. This final rule affects only the licensing and operation of independent spent fuel storage installations and of monitored retrievable storage installations. The owners of these installations, nuclear power plant utilities or DOE, do not fall within the scope of the definition of "small entities" set forth in section 601(3) of the Regulatory Flexibility Act or within the definition of "small business" in section 3 of the Small Business Act, 15 U.S.C. 632, or within the Small Business Size Standards set out in regulations issued by the Small Business Administration at 13 CFR Part 121.

List of Subjects in 10 CFR Parts 2, 19, 20, 21, 51,
70, 72, 73, 75, and 150

Part 2 - Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalty, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

Part 19 - Environmental protection, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Penalty, Radiation protection, Reporting and recordkeeping requirements, Sex discrimination.

Part 21 - Nuclear power plants and reactors, Penalty, Radiation protection, Reporting and recordkeeping requirements.

Part 51 - Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

Part 70 - Hazardous materials - transportation, Nuclear materials, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

Part 72 - Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

Part 73 - Hazardous materials - transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 75 - Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 150 - Hazardous materials - transportation, Intergovernmental relations, Nuclear materials, Penalty, Reporting and recordkeeping requirements, Security measures, Source material, Special nuclear material.

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, 5 U.S.C. 552 and 553, and the Nuclear Waste Policy Act of 1982, the NRC is adopting the following revision to 10 CFR Part 72 and related conforming amendments to 10 CFR Parts 2, 19, 20, 21, 51, 70, 73, 75, and 150.

1. 10 CFR Part 72 is revised to read as follows:

PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT
STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Subpart A -General Provisions

Sec.

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- 72.11 Filing of application for specific license.
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Subpart F--General Design Criteria

- 72.91 General considerations.
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- 72.100 Quality assurance requirements.
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- 72.113 Control of purchased material, equipment, and services.
- 72.115 Identification and control of materials, parts, and components.
- 72.117 Control of special processes.
- 72.119 Licensee inspection.
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- 72.131 Corrective action.
- 72.133 Quality assurance records.
- 72.135 Audits.

Subpart H--Physical Protection

- 72.201 Physical security plan.
- 72.202 Design for physical protection.
- 72.203 Safeguards contingency plan.
- 72.204 Changes to physical security and safeguards contingency plans.

Subpart I--Training and Certification of Personnel

- 72.301 Operator requirements.
- 72.302 Operator training and certification program.
- 72.303 Physical requirements.

Subpart J--Provision of MRS Information to State

Governments and Indian Tribes

- 72.310 Provision of MRS information.
- 72.312 Participation in license reviews.
- 72.314 Notice to States.
- 72.316 Representation.

Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021);

sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161).

Section 72.34 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134 Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2244 (42 U.S.C. 10101, 10137(a), 10161(h)).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 72.6, 72.14, 72.15, 72.16, 72.17(d), 72.18, 72.19, 72.33(a), (b)(1), (4), (5), (c), (d)(1), (2), (e), (f), 72.35(a), 72.36(a), 72.37(b), 72.51(b), (c), 72.52(a), (b), 72.53, 72.54, 72.83, 72.85, 72.91, 72.92, 72.93, 72.94, 72.95, 72.96, 72.100(b), (c), 72.107, 72.113, 72.115, 72.119, 72.125, 72.127, 72.129, 72.131, 72.135, 72.201, 72.203, 72.204 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 72.10(a), (e), 72.14, 72.15, 72.16, 72.17, 72.18, 72.19, 72.33(a), (b)(1), (4), (5), (c), (d)(1), (2), (e), (f), 72.35(a), 72.36(a), 72.37(b), 72.70(a)-(d), (f), 72.71, 72.73, 72.77, 72.79, 72.81(c), (d), (f), 72.83, 72.85, 72.91, 72.92, 72.93, 72.94, 72.95, 72.96, 72.100(b), (c), 72.101, 72.103, 72.105, 72.107, 72.109, 72.111, 72.113, 72.115, 72.117, 72.119, 72.121, 72.123, 72.125, 72.127, 72.129, 72.131, 72.135, 72.201, 72.202, 72.203, 72.204, 72.301, 72.302, 72.303 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 72.10(e), 72.11, 72.14, 72.15, 72.16, 72.17, 72.18, 72.19, 72.33(b)(3), (c)(5), (d)(3), (e), (f), 72.35(b), (c), 72.36(b), 72.38(a), (b), (c), 72.39,

72.50, 72.51, 72.52(a), (b), 72.53(a), 72.54(a), 72.55, 72.56, 72.71(b), 72.73(b), 72.100(b), (c), (d), 72.103(a), 72.105, 72.107, 72.109, 72.111, 72.113(a), (b), 72.115, 72.119, 72.121, 72.127, 72.129, 72.131, 72.133, 72.135, 72.201, 72.203, 72.204, 72.302 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

Subpart A--General Provisions

§ 72.1 Purpose.

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to receive, transfer, and possess power reactor spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) and the terms and conditions under which the Commission will issue such licenses, including licenses to the U.S. Department of Energy (DOE) for the provision of not more than 1900 metric tons of spent fuel storage capacity at facilities not owned by the Federal Government on January 7, 1983 for the Federal interim storage program under Subtitle B - Interim Storage Program of the Nuclear Waste Policy Act of 1982 (NWPA). The regulations in this part also establish requirements, procedures, and criteria for the issuance of licenses to DOE to receive, transfer, package, and possess power reactor spent fuel, high-level radioactive waste, and other radioactive materials associated with the spent fuel and high-level radioactive waste storage, in a monitored retrievable storage installation (MRS) if authorized by Congress pursuant to section 141 of the Nuclear Waste Policy Act of 1982.

§ 72.2 Scope.

(a) Except as provided in § 72.6(b), licenses issued under this part are limited to the receipt, transfer, packaging, and possession of (1) power reactor spent fuel to be stored in a complex that is designed and constructed specifically for storage of power reactor spent fuel aged for at least one year, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI); or (2) power reactor spent fuel to be stored in a monitored retrievable storage installation (MRS) owned by DOE that is designed and constructed specifically for the storage of spent fuel aged for at least one year, high-level radioactive waste that is in a solid form, and other radioactive materials associated with spent fuel or high-level radioactive waste storage. The term "Monitored Retrievable Storage Installation" or "MRS", as defined § 72.3, is derived from the NWPA and includes any installation that meets this definition.

(b) The regulations in this part pertaining to an independent spent fuel storage installation (ISFSI) apply to all persons in the United States, including persons in Agreement States. The regulations in this part pertaining to a monitored retrievable storage installation (MRS) apply only to DOE.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of (1) spent fuel in an independent spent fuel storage installation (ISFSI) and (2) spent fuel and solid high-level radioactive waste in a monitored retrievable storage installation (MRS).

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage installation shall be issued in accordance with the requirements of this part as stated in § 72.31, as applicable.

(e) As provided in section 135 of the Nuclear Waste Policy Act of 1982, Pub. L. 97-425, 96 Stat. 2201 at 2232 (42 U.S.C. 10155) the U.S. Department of Energy is not required to obtain a license under the regulations in this part to use available capacity at one or more facilities owned by the Federal Government on January 7, 1983, including the modification and expansion of any such facilities, for the storage of spent nuclear fuel from civilian nuclear power reactors.

§ 72.3 Definitions.

As used in this part:

"Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

"Affected Indian tribe" means any Indian tribe--(1) within whose reservation boundaries a monitored retrievable storage facility is proposed to be located; (2) whose federally defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by the locating of such a facility: Provided, That the Secretary of the Interior finds, upon the petition of the appropriate governmental officials of the tribe, that such effects are both substantial and adverse to the tribe.

"As low as is reasonably achievable" (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to (1) benefits to the public health and safety, (2) other societal and socioeconomic considerations, and (3) the utilization of atomic energy in the public interest.

"Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

"Byproduct material" means 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.

"Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement or manufacture of components of the installation;
or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of paragraphs (1) and (2) of this definition.

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"Confinement systems" means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

"Controlled area" means that area immediately surrounding an ISFSI or MRS for which the licensee exercises authority over its use and within which ISFSI or MRS operations are performed.

"Decommission" means to remove (as a facility) safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license.

"Design bases" means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include: (1) estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved and (2) estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region taking into account the site characteristics and the risks associated with the event.

"Design capacity" means the quantity of spent fuel or high-level radioactive waste, the maximum burnup of the spent fuel in MWD/MTU, the curie content of the waste, and the total heat generation in BTU per hour that the storage installation is designed to accommodate.

"DOE" means the U.S. Department of Energy or its duly authorized representatives.

"Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands.

Areas subject to a one percent or greater chance of flooding in any given year are included.

"High-level radioactive waste" or "HLW" means (1) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (2) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.

"Historical data" means a compilation of the available published and unpublished information concerning a particular type of event.

"Independent spent fuel storage installation" or "ISFSI" means a complex designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage. An ISFSI which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with such other facility and still be considered independent: Provided, that such sharing of utilities and services or physical connections does not: (1) Increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or (2) reduce the margin of safety as defined in the basis for any technical specification of either facility.

"Indian Tribe" means an Indian tribe as defined in the Indian Self Determination and Education Assistance Act (Public Law 93-638).

"Monitored Retrievable Storage Installation" or "MRS" means a complex designed, constructed, and operated by DOE for the receipt, transfer, handling, packaging, possession, safeguarding, and storage of

spent nuclear fuel aged for at least one year and solidified high-level radioactive waste resulting from civilian nuclear activities, pending shipment to a HLW repository or other disposal.

"NEPA" means the National Environmental Policy Act of 1969 including any amendments thereto.

"NWPA" means the Nuclear Waste Policy Act of 1982 including any amendments thereto.

"Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Nuclear Regulatory Commission or the Department of Energy (DOE), except that the DOE 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, as amended (88 Stat. 1244), and Sections 131, 132, 133, 135, 137, and 141 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2229, 2230, 2232, 2241); (2) any State, any political subdivision of a State, or any political entity within a State; (3) any foreign government or nation, or any political subdivision of any such government or nation, or other entity; and (4) any legal successor, representative, agent, or agency of the foregoing.

"Population" means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI or MRS.

"Region" means the geographical area surrounding and including the site, which is large enough to contain all the features related to a phenomenon or to a particular event that could potentially impact the

safe or environmentally sound construction, operation, or decommissioning of an independent spent fuel storage or monitored retrievable storage installation.

"Reservation" means (1) any Indian reservation or dependent Indian community referred to in clause (a) or (b) of section 1151 of title 18, United States Code; or (2) any land selected by an Alaska Native village or regional corporation under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

"Site" means the real property on which the ISFSI or MRS is located.

"Source material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores that contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

"Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material.

"Spent Nuclear Fuel" or "Spent Fuel" means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

"Structures, systems, and components important to safety" mean those features of the ISFSI or MRS whose function is (1) to maintain the conditions required to store spent fuel or high-level radioactive waste safely, (2) to prevent damage to the spent fuel or the high-level radioactive waste container during handling and storage, or (3) to provide reasonable assurance that spent fuel or high-level radioactive waste can be received, handled, packaged, stored, and retrieved without undue risk to the health and safety of the public.

§ 72.4 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be addressed to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Communications, reports, and applications may be delivered in person at the Commission's Offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street NW., Washington, DC.

§ 72.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 72.6 License required; types of licenses.

(a) Licenses for the receipt, handling, storage, and transfer of spent fuel or high-level radioactive waste are of two types: general and specific. Any general license provided in this part is effective without the filing of an application with the Commission or the issuance of a licensing document to a particular person. A specific license is issued to a named person upon application filed pursuant to regulations in this part.

(b) A general license is hereby issued to receive title to and own spent fuel or high-level radioactive waste without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to acquire, deliver, receive, possess, use, or transfer spent fuel or high-level radioactive waste except as authorized in a specific license.

(c) No person may acquire, receive, or possess (1) spent fuel for the purpose of storage in an ISFSI, or (2) spent fuel, high-level radioactive waste, or radioactive material associated with high-level radioactive waste for the purpose of storage in a MRS, except as authorized in a specific license issued by the Commission in accordance with the regulations in this part.

§ 72.7 Specific exemptions.

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

§ 72.8 Denial of licensing by Agreement States.

Agreement States may not issue licenses covering the storage of spent fuel in an ISFSI or the storage of spent fuel and high-level radioactive waste in a MRS.

§ 72.9 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). OMB has approved the information collection requirements contained in this part under control number 3150-0132.

(b) The approved information collection requirements contained in this part appear in §§ 72.11, 72.14 through 72.20, 72.32, 72.33, 72.35 through 72.39, 72.42, 72.50 through 72.56, 72.70, 72.71, 72.73, 72.77, 72.79, 72.81, 72.83, 72.89, 72.91, 72.94, 72.100 through 72.135, 72.201 through 72.204, and 72.302.

§ 72.10 Employee protection.

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, and privileges of employment. The protected activities are established in section 210 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act.

(1) The protected activities include but are not limited to--

(i) Providing the Commission information about possible violations of requirements imposed under either of the above statutes;

(ii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements; or

(iii) Testifying in any Commission proceeding.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in the protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 30 days after an alleged violation occurs by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant, may be grounds for--

(1) Denial, revocation, or suspension of the license.

- (2) Imposition of a civil penalty on the licensee or applicant.
- (3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e) (1) Each licensee and each applicant shall post Form NRC-3, "Notice to Employees," on its premises. Posting must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of Form NRC-3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix D, Part 20 of this chapter or the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Subpart B--License Application, Form, and Contents

§ 72.11 Filing of application for specific license.

(a) Place of filing. Each application for a license, or amendment thereof, under this part should be filed with the Director, Office of

Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Applications, communications, reports, and correspondence may also be delivered in person at the Commission's offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street NW., Washington, DC.

(b) Oath or affirmation. Each application for a license or license amendment (including amendments to such applications), except for those filed by DOE, must be executed in an original signed by the applicant or duly authorized officer thereof under oath or affirmation. Each application for a license or license amendment (including amendments to such applications) filed by DOE must be signed by the Secretary of Energy or the Secretary's authorized representative.

(c) Number of copies of application. Each filing of an application for a license or license amendment under this part (including amendments to such applications) must include, in addition to a signed original, 25 copies of each portion of such application, safety analysis report, environmental report, and any amendments. Another 125 copies shall be retained by the applicant for distribution in accordance with instruction from the Director or the Director's designee.

(d) Fees. The application, amendment, and renewal fees applicable to a license covering the storage of spent fuel in an ISFSI are those shown in § 170.31 of this chapter.

(e) Notice of docketing. Upon receipt of an application for a license or license amendment under this part, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee will assign a docket number to the application, notify the applicant of the docket number, instruct the applicant to distribute copies retained by

the applicant in accordance with paragraph (c) of this section, and cause a notice of docketing to be published in the Federal Register. The notice of docketing shall identify the site of the ISFSI or the MRS by locality and State and may include a notice of hearing or a notice of proposed action and opportunity for hearing as provided by § 72.34 of this part. In the case of an application for a license or an amendment to a license for an MRS, the Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee, in accordance with § 72.310 of this part, shall send a copy of the notice of docketing to the Governor and legislature of any State in which an MRS is or may be located, to the Chief Executive of the local municipality, to the Governors of any contiguous States and to the governing body of any affected Indian tribe.

§ 72.12. Elimination of repetition.

In any application under this part, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: Provided, that such references are clear and specific.

§ 72.13 Public inspection of application.

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with provisions of the regulations contained in Part 2 and Part 9 of this chapter.

§ 72.14 Contents of application: General and financial information.

Each application must state:

- (a) Full name of applicant;
- (b) Address of applicant;
- (c) Description of business or occupation of applicant;
- (d) If applicant is:
 - (1) An individual: citizenship and age;
 - (2) A partnership: name, citizenship, and address of each partner and the principal location at which the partnership does business;
 - (3) A corporation or an unincorporated association:
 - (i) The State in which it is incorporated or organized and the principal location at which it does business; and
 - (ii) The names, addresses, and citizenship of its directors and principal officers;
 - (4) Acting as an agent or representative of another person in filing the application: the identification of the principal and the information required under this paragraph with respect to such principal.
 - (5) The Department of Energy: the identification of the DOE organization responsible for the construction and operation of the ISFSI or MRS, including a description of any delegations of authority and assignments of responsibilities.
- (e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested.

The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary funds; or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

- (1) Estimated construction costs;
- (2) Estimated operating costs over the planned life of the ISFSI or MRS complex; and
- (3) Estimated shutdown and decommissioning costs, and the necessary financial arrangements to provide reasonable assurance prior to licensing that shutdown, decontamination, and decommissioning will be carried out after the removal of spent fuel and/or high-level radioactive waste from storage.

§ 72.15. Contents of application: Technical information.

- Each application for a license under this part must include a Safety Analysis Report describing the proposed ISFSI or MRS for the receipt, handling, packaging, and storage of spent fuel or high-level radioactive waste, including how the ISFSI or MRS will be operated. The minimum information to be included in this report must consist of the following:

- (a) A description and safety assessment of the site on which the ISFSI or MRS is to be located, with appropriate attention to the design bases for external events. Such assessment must contain an analysis and evaluation of the major structures, systems, and components of the ISFSI or MRS that bear on the suitability of the site when the ISFSI or MRS is operated at its design capacity. If the proposed ISFSI or MRS is to be located on the site of a nuclear power plant or other licensed facility,

the potential interactions between the ISFSI or MRS and such other facility must be evaluated.

(b) A description and discussion of the ISFSI or MRS structures with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(c) The design of the ISFSI or MRS in sufficient detail to support the findings in § 72.31, including:

(1) The design criteria for the ISFSI or MRS pursuant to Subpart F of this part, with identification and justification for any additions to or departures from the general design criteria;

(2) The design bases and the relation of the design bases to the design criteria;

(3) Information relative to materials of construction, general arrangement, dimensions of principal structures, and descriptions of all structures, systems, and components important to safety, in sufficient detail to support a finding that the ISFSI or MRS will satisfy the design bases with an adequate margin for safety; and

(4) Applicable codes and standards.

(d) An analysis and evaluation of the design and performance of structures, systems, and components important to safety, with the objective of assessing the impact on public health and safety resulting from operation of the ISFSI or MRS and including determination of:

(1) The margins of safety during normal operations and expected operational occurrences during the life of the ISFSI or MRS; and

(2) The adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents, including natural and manmade phenomena and events.

(e) The means for controlling and limiting occupational radiation exposures within the limits given in Part 20 of this chapter, and for meeting the objective of maintaining exposures as low as is reasonably achievable.

(f) The features of ISFSI or MRS design and operating modes to reduce to the extent practicable radioactive waste volumes generated at the installation.

(g) An identification and justification for the selection of those subjects that will be probable license conditions and technical specifications. These subjects must cover the design, construction, preoperational testing, operation, and decommissioning of the ISFSI or MRS.

(h) A plan for the conduct of operations, including the planned managerial and administrative controls system, and the applicant's organization, and program for training of personnel pursuant to Subpart I.

(i) If the proposed ISFSI or MRS incorporates structures, systems, or components important to safety whose functional adequacy or reliability have not been demonstrated by prior use for that purpose or cannot be demonstrated by reference to performance data in related applications or to widely accepted engineering principles--an identification of these structures, systems, or components along with a schedule showing how safety questions will be resolved prior to the initial receipt of spent fuel or high-level radioactive waste for storage at the ISFSI or MRS.

(j) The technical qualifications of the applicant to engage in the proposed activities, as required by § 72.17.

(k) A description of the applicant's plans for coping with emergencies, as required by § 72.19.

(1) A description of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal operations and expected operational occurrences. The description must identify the design objectives and the means to be used for keeping levels of radioactive material in effluents to the environment as low as is reasonably achievable and within the exposure limits stated in § 72.83. The description must include:

(1) An estimate of the quantity of each of the principal radionuclides expected to be released annually to the environment in liquid and gaseous effluents produced during normal ISFSI or MRS operations;

(2) A description of the equipment and processes used in radioactive waste systems; and

(3) A general description of the provisions for packaging, storage, and disposal of solid wastes containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(m) An analysis of the potential dose equivalent or committed dose equivalent to an individual outside the controlled area from accidents or natural phenomena events that result in the release of radioactive material to the environment or direct radiation from the ISFSI or MRS. The calculations of individual dose equivalent or committed dose equivalent must be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event.

(n) A description of the quality assurance program that satisfies the requirements of Subpart G to be applied to the design, fabrication, construction, testing, operation, modification, and decommissioning of the structures, systems, and components of the ISFSI or MRS important to

safety. The description must identify the structures, systems, and components important to safety. The program must also apply to managerial and administrative controls used to ensure safe operation of the ISFSI or MRS.

(o) A description of the detailed security measures for physical protection, including design features and the plans required by Subpart H. For an application from DOE for an ISFSI or MRS, DOE will provide a description of the physical security plan for protection against radiological sabotage as required by Subpart H. An application submitted by DOE for an ISFSI or MRS must include a certification that it will provide at the ISFSI or MRS such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security.

(p) A description of the program covering preoperational testing and initial operations.

(q) A description of the decommissioning plan required under § 72.18.

§ 72.16 Contents of application: Technical specifications.

Each application under this part shall include proposed technical specifications in accordance with the requirements of § 72.33 and a summary statement of the bases and justifications for these technical specifications.

§ 72.17 Contents of application: Applicant's technical qualifications.

Each application under this part must include:

(a) The technical qualifications, including training and experience, of the applicant to engage in the proposed activities.

(b) A description of the personnel training program required under Subpart I.

(c) A description of the applicant's operating organization, delegations of responsibility and authority, and the minimum skills and experience qualifications relevant to the various levels of responsibility and authority.

(d) A commitment by the applicant to have and maintain an adequate complement of trained and certified installation personnel prior to the receipt of spent fuel or high-level radioactive waste for storage.

§ 72.18 Decommissioning plan, including financing and recordkeeping.

(a) Each application under this part must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel or high-level radioactive waste has been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI or MRS that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The decommissioning plan must include the financial arrangements made by the applicant to provide reasonable assurance that the planned decontamination and decommissioning will be carried out.

§ 72.19 Emergency plan.

An application to store spent fuel in an ISFSI or to store spent fuel and high-level radioactive waste in an MRS must include plans for coping with emergencies.

(a) An emergency plan must include the following:

(1) Facility description: A brief description of the licensee's facility and area near the site.

(2) Types of accidents: An identification of each type of accident for which protective actions may be needed.

(3) Classification of accidents: A classification system for classifying accidents as site area emergencies or general emergencies.

(4) Detection of accidents: Identification of the means of detecting each type of accident in a timely manner.

(5) Mitigation of consequences: A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(6) Assessment of releases: A brief description of the methods and equipment to assess releases of radioactive materials.

(7) Responsibilities: A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(8) Notification and coordination: A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for

the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify NRC immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.

(9) Information to be communicated: A brief description of the types of information on facility status, radioactive releases, and recommended actions, if necessary, to be given to offsite response organizations and to the NRC.

(10) Training: A brief description of the training the licensee will provide workers on how to respond to an emergency and any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel.

(11) Safe shutdown: A brief description of the means of restoring the facility to a safe condition after an accident.

(12) Exercises and audits: Provisions for conducting quarterly communications checks with offsite response organizations and annual onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations shall include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the annual exercises. Participation of offsite response organizations in annual exercises although strongly recommended is not required. Exercises must use scenarios not known to exercise participants. The licensee shall conduct an audit of each exercise using individuals not having direct

implementation responsibility for the plan. Audits must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the audits must be corrected.

(13) Hazardous chemicals: A description sufficient to demonstrate the applicant's compliance with the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, if applicable to the applicant's activities at the proposed place of storage of the spent nuclear fuel or high-level waste.

(b) The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to NRC. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(c) For an ISFSI that is located on the site of a nuclear power reactor licensed for operation by the Commission, the emergency plan required by 10 CFR 50.47 shall be deemed to satisfy the requirements of this section.

§ 72.20 Environmental report

Each application for an ISFSI or MRS license under this part must be accompanied by an Environmental Report which meets the requirements of Subpart A of Part 51 of this chapter.

§ 72.21 (Reserved)

Subpart C--Issuance and Conditions of License

§ 72.31 Issuance of license.

(a) Except as provided in paragraph (c) of this section, the Commission will issue a license under this part upon a determination that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that:

(1) The applicant's proposed ISFSI or MRS design complies with Subpart F;

(2) The proposed site complies with the criteria in Subpart E;

(3) If on the site of a nuclear power plant or other licensed activity or facility, the proposed ISFSI would not pose an undue risk to the safe operation of such nuclear power plant or other licensed activity or facility;

(4) The applicant is qualified by reason of training and experience to conduct the operation covered by the regulations in this part;

(5) The applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate;

(6) Except for DOE, the applicant for an ISFSI or MRS is financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(7) The applicant's quality assurance plan complies with Subpart G;

(8) The applicant's physical protection provisions comply with Subpart H. DOE has complied with the safeguards and physical security provisions identified in § 72.15(o);

(9) The applicant's personnel training program complies with Subpart I;

(10) Except for DOE, the applicant's decommissioning plan and its financing pursuant to § 72.18 provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public;

(11) The applicant's emergency plan complies with § 72.19;

(12) The applicable provisions of Part 170 of this chapter have been satisfied;

(13) There is reasonable assurance that (i) the activities authorized by the license can be conducted without endangering the health and safety of the public and (ii) these activities will be conducted in compliance with the applicable regulations of this chapter; and

(14) The issuance of the license will not be inimical to the common defense and security.

(b) Grounds for denial of a license to store spent fuel in the proposed ISFSI or to store spent fuel and high-level radioactive waste in the proposed MRS may be the commencement of construction prior to (1) a finding by the Director, Office of Nuclear Materials Safety and Safeguards or designee or (2) a finding after a public hearing by the presiding officer, Atomic Safety and Licensing Board, Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body, as appropriate that the action called for is the issuance of the proposed license with any appropriate conditions to protect environmental values. This finding is to be made on the basis of information filed and evaluations made pursuant to Subpart A of Part 51 of this chapter or in the case of an MRS on the basis of evaluations made pursuant to section 141(c) of NWPA and after weighing the environmental, economic, technical and

other benefits against environmental costs and considering available alternatives.

(c) For facilities that have been covered under previous licensing actions including the issuance of a construction permit under Part 50 of this chapter, a reevaluation of the site is not required except where new information is discovered which could alter the original site evaluation findings. In this case, the site evaluation factors involved will be reevaluated.

§ 72.32 Duration of license; renewal.

(a) Each license issued under this part must be for a fixed period of time to be specified in the license. The license term for an ISFSI must not exceed 20 years from the date of issuance. The license term for an MRS must not exceed 40 years from the date of issuance. Licenses for either type of installation may be renewed by the Commission at the expiration of the license term upon application by the licensee and pursuant to the requirements of this rule.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of Subpart B at least two years prior to the expiration of the existing license. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference: Provided, that such references are clear and specific.

(c) In any case in which a licensee, not less than two years prior to expiration of its existing license, has filed an application in proper form for renewal of a license, the existing license shall not expire

until a final decision concerning the application for renewal has been made by the Commission.

§ 72.33 License conditions.

(a) Each license issued under this part must include license conditions. The license conditions may be derived from the analyses and evaluations included in the Safety Analysis Report and amendments thereto submitted pursuant to § 72.15. License conditions pertain to design, construction and operation. The Commission may also include additional license conditions as it finds appropriate.

(b) Each license issued under this part must be subject to the following conditions, even if they are not explicitly stated therein;

(1) Neither the licensee nor any right thereunder shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the Atomic Energy Act of 1954, as amended, and give its consent in writing.

(2) The license must be subject to revocation, suspension, modification, or amendment in accordance with the procedures provided by the Atomic Energy Act of 1954, as amended, and Commission regulations.

(3) Upon request of the Commission, the licensee shall, at any time before expiration of the license, submit written statements, signed under oath or affirmation if appropriate, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(4) Prior to the receipt of spent fuel for storage at an ISFSI or the receipt of spent fuel and high-level radioactive waste for storage at an MRS, the licensee shall have in effect an NRC-approved program covering the training and certification of personnel that meets the requirements of Subpart I.

(5) The licensee shall permit the operation of the equipment and controls that are important to safety of the ISFSI or the MRS only by personnel whom the licensee has certified as being adequately trained to perform such operations, or by uncertified personnel who are under the direct visual supervision of a certified individual.

(c) Each license issued under this part must include technical specifications. Technical specifications must include requirements in the following categories:

(1) Functional and operating limits and monitoring instruments and limiting control settings. (i) Functional and operating limits for an ISFSI or MRS are limits on fuel or waste handling and storage conditions that are found to be necessary to protect the integrity of the stored fuel or waste container, to protect employees against occupational exposures and to guard against the uncontrolled release of radioactive materials; and (ii) Monitoring instruments and limiting control settings for an ISFSI or MRS are those related to fuel or waste handling and storage conditions having significant safety functions.

(2) Limiting conditions. Limiting conditions are the lowest functional capability or performance levels of equipment required for safe operation.

(3) Surveillance requirements. Surveillance
(i) inspection and monitoring of spent fuel or high-
waste in storage; (ii) inspection, test and calibration
ensure that the necessary integrity of required systems an
is maintained; (iii) confirmation that operation of the ISFSI
within the required functional and operating limits; and (iv) co
tion that the limiting conditions required for safe storage are met

(4) Design features. Design features include items that would h
a significant effect on safety if altered or modified, such as materials
of construction and geometric arrangements.

(5) Administrative controls. Administrative controls include the
organization and management procedures, recordkeeping, review and audit,
and reporting necessary to assure that the operations involved in the
storage of spent fuel in an ISFSI and the storage of spent fuel and high-
level radioactive waste in an MRS are performed in a safe manner.

(d) Each license authorizing the receipt, handling, and storage of
spent fuel or high-level radioactive waste under this part must include
technical specifications that, in addition to stating the limits on the
release of radioactive materials for compliance with limits of Part 20 of
this chapter and the "as low as is reasonably achievable" objectives for
effluents, require that:

(1) Operating procedures for control of effluents be established
and followed, and equipment in the radioactive waste treatment systems be
maintained and used, to meet the requirements of § 72.83;

(2) An environmental monitoring program be established to ensure
compliance with the technical specifications for effluents; and

(3) An annual report be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 60 days after January 1 of each year, specifying the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous 12 months of operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. On the basis of this report and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

(e) The licensee shall make no change that would decrease the effectiveness of the physical security plan prepared pursuant to § 72.201 without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 72.39. A licensee may make changes to the physical security plan without prior Commission approval, provided that such changes do not decrease the effectiveness of the plan. The licensee shall furnish to the Commission a report containing a description of each change within two months after the change is made, and shall maintain records of changes to the plan made without prior Commission approval for a period of 3 years from the date of the change.

(f) A licensee shall follow and maintain in effect an emergency plan that is approved by the Commission. The licensee may make changes to the approved plan without Commission approval only if such changes do

not decrease the effectiveness of the plan. Within six months after any change is made, the licensee shall submit a report containing a description of any changes made in the plan to the appropriate NRC Regional Office specified in Appendix D to Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Proposed changes that decrease the effectiveness of the approved emergency plan must not be implemented unless the licensee has received prior approval of such changes from the Commission.

§ 72.34 Public hearings.

(a) In connection with each application for a license under this part, the Commission shall issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with §§ 2.105 or 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(b)(1) In connection with each application for an amendment to a license under this part, the Commission shall, except as provided in paragraph (b)(2) of this section, issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with §§ 2.105 or 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(2) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee may dispense with a notice of proposed action and opportunity for hearing or a notice of hearing and take immediate

action on an amendment to a license issued under this part upon a determination that the amendment does not present a genuine issue as to whether the health and safety of the public will be significantly affected. After taking the action, the Director or the Director's designee shall promptly publish a notice in the Federal Register of the action taken and of the right of interested persons to request a hearing on whether the action should be rescinded or modified. If the action taken amends an MRS license, the Director or the Director's designee shall also inform the appropriate State and local officials.

(c) The notice of proposed action and opportunity for hearing or the notice of hearing may be included in the notice of docketing required to be published by § 72.11 of this part.

(d) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice of proposed action and opportunity for hearing, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee may take the proposed action, and thereafter shall promptly inform the appropriate State and local officials and publish a notice in the Federal Register of the action taken. In accordance with § 2.764(c) of this chapter, the Director, Office of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an ISFSI or an MRS until expressly authorized to do so by the Commission.

§ 72.35 Changes, tests, and experiments.

(a)(1) The holder of a license issued under this part may (i) make changes in the ISFSI or MRS described in the Safety Analysis Report, (ii) make changes in the procedures described in the Safety Analysis

Report, or (iii) conduct tests or experiments not described in the Safety Analysis Report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, a significant increase in occupational exposure or a significant unreviewed environmental impact.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

(b)(1) The licensee shall maintain records of changes in the ISFSI or MRS and of changes in procedures made pursuant to this section if these changes constitute changes in the ISFSI or MRS or procedures described in the Safety Analysis Report. The licensee shall also maintain records of tests and experiments carried out pursuant to paragraph (a) of this section. These records must include a written safety evaluation that provides the bases for the determination that the change, test, or experiment does not involve an unreviewed safety question. The records of changes in the ISFSI or MRS and of changes in procedures and records of tests must be maintained until the Commission terminates the license.

(2) Annually, or at such shorter interval as may be specified in the license, the licensee shall furnish to the appropriate regional office,

specified in Appendix D of Part 20 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a brief description of changes, tests, and experiments made under paragraph (a) of the section, including a summary of the safety evaluation of each. Any report submitted by a licensee pursuant to this paragraph will be made a part of the public record pertaining to this license.

(c) The holder of a license issued under this part who desires (1) to make changes in the ISFSI or MRS or the procedures as described in the Safety Analysis Report, or to conduct tests or experiments not described in the Safety Analysis Report, that involve an unreviewed safety question, a significant increase in occupational exposure, or significant unreviewed environmental impact, or (2) to change the license conditions shall submit an application for amendment of the license, pursuant to § 72.39.

§ 72.36 Transfer of license.

(a) No license or any right included in a license issued under this part for an ISFSI or MRS shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license must include as much of the information described in §§ 72.14 and 72.17 with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application must also include a

statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right--subject to the licensing requirements of the Act and these regulations--to possession of the radioactive materials and the storage installation involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines that:

(1) The proposed transferee is qualified to be the holder of the license; and

(2) Transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission.

§ 72.37 Creditor regulations.

(a) This section does not apply to an ISFSI or MRS constructed and operated by DOE.

(b) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not

owned by the United States that is the subject of a license or on any interest in special nuclear material in spent fuel; Provided:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing possession or the transfer of the license.

(c) Any creditor so secured may apply for transfer of the license covering spent fuel by filing an application for transfer of the license pursuant to § 72.36(b). The Commission will act upon the application pursuant to § 72.36(c).

(d) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(e) As used in this section, "creditor" includes, without implied limitation, the trustee under any mortgage, pledge, or lien on spent fuel in storage made to secure any creditor; any trustee or receiver of spent fuel appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien; any purchaser of the spent fuel at the sale thereof upon foreclosure of the mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or any assignee of any such purchaser.

§ 72.38 Application for termination of license.

(a) The licensee shall apply to the Commission for authority to surrender a license voluntarily and to decommission the ISFSI or MRS and dispose of the materials stored therein. The Commission may require information, including information as to proposed procedures for the disposal of radioactive material and decontamination of the site, to determine whether there is reasonable assurance that the decommissioning and disposal will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public.

(b) Upon a finding of reasonable assurance that the decommissioning of the ISFSI or MRS and disposal of the materials stored therein will be performed in accordance with the regulations in this chapter and will provide adequate protection to the health and safety of the public, and after notice to interested persons, the Commission will authorize decommissioning and disposal and terminate the license upon completion of decommissioning procedures in accordance with any conditions specified in the authorization.

§ 72.39 Application for amendment of license.

Whenever a holder of a license desires to amend the license, an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

§ 72.40 Issuance of amendment.

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

§ 72.41 Modification, revocation, and suspension of license.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, as amended, or by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following:

(1) Any material false statement in the application or in any statement of fact required under Section 182 of the Act;

(2) Conditions revealed by the application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application;

(3) Failure to operate an ISFSI or MRS in accordance with the terms of the license;

(4) Violation of, or failure to observe, any of the terms and conditions of the Act, or of any applicable regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the

health and safety of the public, the Commission prior to following any of the procedures provided under sections 551-558 of Title 5 of the United States Code, may cause the taking of possession of any special nuclear material contained in spent fuel held by the licensee.

§ 72.42 Backfitting.

(a) As used in this section, "backfitting" means the addition, elimination, or modification, after the license has been issued, of

- (1) structures, systems, or components of an ISFSI or MRS, or
- (2) procedures or organization required to operate an ISFSI or MRS.

(b) The Commission will require backfitting of an ISFSI or MRS if it finds that such action is necessary to assure adequate protection to occupational or public health and safety, or to bring the ISFSI or MRS into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by a licensee.

(c) The Commission may require the backfitting of an ISFSI or MRS if it finds (1) that there is a substantial increase in the overall protection of the occupational or public health and safety to be derived from the backfit, and (2) that the direct and indirect costs of implementation for that ISFSI or MRS are justified in view of this increased protection.

(d) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of an ISFSI or MRS as it deems appropriate.

Subpart D--Records, Reports, Inspections, and Enforcement

§ 72.50 Safety analysis report updating.

(a) The design, description of planned operations, and other information submitted in the Safety Analysis Report shall be updated by the licensee and submitted to the Commission at least once every six months after issuance of the license during final design and construction, until preoperational testing is completed, with final Safety Analysis Report completion and submittal to the Commission at least 90 days prior to the planned receipt of spent fuel or high-level radioactive waste. The final submittal must include a final analysis and evaluation of the design and performance of structures, systems, and components that are important to safety taking into account any pertinent information developed since the submittal of the license application.

(b) After the first receipt of spent fuel or high-level radioactive waste for storage, the Safety Analysis Report must be updated annually and submitted to the Commission by the licensee. This submittal must include the following:

(1) New or revised information relating to applicable site evaluation factors, including the results of environmental monitoring programs.

(2) A description and analysis of changes in the structures, systems, and components of the ISFSI or MRS, with emphasis upon (i) performance requirements, (ii) the bases, with technical justification therefor upon which such requirements have been established, and (iii) evaluations showing that safety functions will be accomplished.

(3) An analysis of the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed

to meeting the requirements of which are applicable to the design, construction, or operation of the ISFSI or MRS.

§ 72.51 Material balance, inventory, and records requirements for stored materials.

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all spent fuel and high-level radioactive waste in storage. The records must include as a minimum the name of shipper of the material to the ISFSI or MRS, the estimated quantity of radioactive material per item (including special nuclear material in spent fuel), item identification and seal number, storage location, onsite movements of each fuel assembly or storage canister, and ultimate disposal. These records for spent fuel at an ISFSI or for spent fuel and high-level radioactive waste at a MRS must be retained for as long as the material is stored and for a period of five years after the material is disposed of or transferred out of the ISFSI or MRS.

(b) Each licensee shall conduct a physical inventory of all spent fuel and high-level radioactive waste in storage at intervals not to exceed 12 months unless otherwise directed by the Commission. The licensee shall retain a copy of the current inventory as a record until the Commission terminates the license.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for material in storage. The licensee shall retain a copy of the current material control and accounting procedures until the Commission terminates the license.

(d) Records of spent fuel and high-level radioactive waste in storage must be kept in duplicate. The duplicate set of records must be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel transferred out of an ISFSI or of spent fuel or high-level radioactive waste transferred out of an MRS must be preserved for a period of five years after the date of transfer.

§ 72.52 Reports of accidental criticality or loss of special nuclear material.

(a) Each licensee shall notify the NRC Operations Center¹ within one hour of discovery of accidental criticality or any loss of special nuclear material.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or any other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) of this chapter applies to all telephonic reports required by this section.

(c) Reports required under § 73.71 of this chapter need not be duplicated under the requirements of this section.

¹Commercial telephone number of the NRC Operations Center is (301)951-0550.

§ 72.53 Material status reports.

(a) Except as provided in paragraph (b) of this section, each licensee shall complete and submit to the Commission (on DOE/NRC Form-742, Material Balance Report) material status reports in accordance with the printed instructions for completing the form. These reports must provide information concerning the special nuclear material contained in the spent fuel possessed, received, transferred, disposed of, or lost by the licensee. Material status reports must be made as of March 31 and September 30 of each year and filed within 30 days after the end of the period covered by the report. The Commission may, when good cause is shown, permit a licensee to submit Material Status Reports at other times.

(b) Any licensee who is required to submit routine material status reports pursuant to § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.54 Nuclear material transfer reports.

(a) Except as provided in paragraph (b) of this section, whenever the licensee transfers or receives spent fuel, the licensee shall complete and distribute a Nuclear Material Transaction Report on DOE/NRC Form-741 in accordance with printed instructions for completing the form. Each ISFSI licensee who receives spent fuel from a foreign source shall complete both the supplier's and receiver's portion of DOE/NRC Form-741, verify the identity of the spent fuel, and indicate the results on the receiver's portion of the form.

(b) Any licensee who is required to submit inventory change reports on DOE/NRC Form-741 pursuant to § 75.34 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.55 Other records and reports.

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules, regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee, shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission.

(c) Records that are required by the regulations in this part or by the license conditions must be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, the above records must be maintained until the Commission terminates the license.

(d) Any record that must be maintained pursuant to this part may be either the original or a reproduced copy by any state of the art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

§ 72.56 Inspections and tests.

(a) Each licensee under this part shall permit inspection by duly authorized representatives of the Commission of its records, premises, and activities and of spent fuel or high-level radioactive waste in its possession related to the specific license as may be necessary to effectuate the purposes of the Act, including section 105 of the Act.

(b) Each licensee under this part shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, packaging, or transfer of spent fuel or high-level radioactive waste.

(c)(1) Each licensee under this part shall upon request by the Director, Office of Nuclear Material Safety and Safeguards provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office must be convenient to and have full access to the installation and provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary, and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other onsite space, is suggested as a guide. For sites containing multiple facilities, additional space may be requested to accommodate additional full-time inspectors. The office space that is provided must be subject to the approval of the Director, Office of

Enforcement. All furniture, supplies and Commission equipment will be furnished by the Commission.

(3) Each licensee under this part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Administrator as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part.

(e) A report of the preoperational test acceptance criteria and test results must be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, at least 30 days prior to the receipt of spent fuel or high-level radioactive waste.

§ 72.57 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, as amended, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Atomic Energy Act for violation of Sections 53, 57, 62, 63, 81, or 82 of

the Atomic Energy Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Atomic Energy Act. Any person who willfully violates any provision of the Atomic Energy Act, or any regulation or order issued thereunder, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

Subpart E - Siting Evaluation Factors

§ 72.70 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI or MRS must be investigated and assessed.

(b) Proposed sites for the ISFSI or MRS must be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI or MRS.

(c) Design basis external events must be determined for each combination of proposed site and proposed ISFSI or MRS design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI or MRS design shall be deemed unsuitable for the location of the ISFSI or MRS.

(e) Pursuant to Subpart A of Part 51 of this chapter for each proposed site for an ISFSI and pursuant to section 141 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2241, 42 U.S.C. 10161) for each proposed site for an MRS, the potential for radiological and other environmental impacts on the region must be evaluated with due consideration of

the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility must be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

§ 72.71 Design basis external natural events.

(a) Natural phenomena that may exist or that can occur in the region of a proposed site must be identified and assessed according to their potential effects on the safe operation of the ISFSI or MRS. The important natural phenomena that affect the ISFSI or MRS design must be identified.

(b) Records of the occurrence and severity of those important natural phenomena must be collected for the region and evaluated for reliability, accuracy, and completeness. The applicant shall retain these records until the license is issued.

(c) Appropriate methods must be adopted for evaluating the design basis external natural events based on the characteristics of the region and the current state of knowledge about such events.

§ 72.73 Design basis external man-induced events.

(a) The region must be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI or MRS. The important potential man-induced events that affect the ISFSI or MRS design must be identified.

(b) Information concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods must be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

§ 72.75 Siting limitations.

(a) An ISFSI which is owned and operated by DOE must not be located at any site within which there is a candidate site for a HLW repository. This limitation shall apply until such time as DOE decides that such candidate site is no longer a candidate site under consideration for development as a HLW repository.

(b) An MRS must not be sited in any state in which there is located any site approved for site characterization for a HLW repository. This limitation shall apply until such time as DOE decides that the candidate site is no longer a candidate site under consideration for development as a repository. This limitation shall continue to apply to any site selected for construction as a repository.

(c) If an MRS is located, or is planned to be located, within 50 miles of the first HLW repository, any Commission decision approving the first HLW repository application must limit the quantity of spent fuel or high-level radioactive waste that may be stored. This limitation shall prohibit the storage of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal, or a quantity of solidified high-level radioactive waste resulting from the reprocessing of such a quantity of

spent fuel, in both the repository and the MRS until such time as a second repository is in operation.

§ 72.77 Identifying regions around an ISFSI or MRS site.

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI or MRS must be identified.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential measurable effects on the population or the environment from ISFSI or MRS activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to (1) the present and future character and the distribution of population, (2) consideration of present and projected future uses of land and water within the region, and (3) any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

§ 72.79 Defining potential effects of the ISFSI or MRS on the region.

(a) The proposed site must be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site must be evaluated with respect to the effects on the regional environment resulting from construction, operation, and decommissioning for the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics must be taken into account.

§ 72.81 Geological and seismological characteristics.

(a)(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO, Charleston, SC, and Attica, NY, sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) For those sites that have been evaluated under paragraph (a)(1) of this section that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized design earthquake (DE) described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific DE may be determined by using the criteria and level of investigations required by Appendix A of Part 100 of this chapter.

(b) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of Appendix A of Part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(c) Sites other than bedrock sites must be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(d) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(e) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(f) The design earthquake (DE) for use in the design of structures must be determined as follows:

(1) For sites that have been evaluated under the criteria of Appendix A of 10 CFR Part 100, the DE must be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(2) Regardless of the results of the investigations anywhere in the continental U.S., the DE must have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

§ 72.83 Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area must not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to (1) planned discharges of radioactive materials, radon and its decay products excepted, to the general environment, (2) direct radiation from ISFSI or MRS operations, and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions must be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations.

(c) Operational limits must be established for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations to meet the limits given in paragraph (a) of this section.

§ 72.85 Controlled area of an ISFSI or MRS.

(a) For each ISFSI or MRS site, a controlled area must be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to the whole body or any organ from any design basis accident. The minimum distance from the spent fuel or high-level radioactive waste handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

§ 72.87 (Reserved)

§ 72.89 Spent fuel or high-level radioactive waste transportation.

The proposed ISFSI or MRS must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel or high-level radioactive waste within the region.

Subpart F - General Design Criteria

§ 72.91 General considerations.

(a) Pursuant to the provisions of § 72.15, an application to store spent fuel in an ISFSI or to store spent fuel or high-level radioactive waste in an MRS must include the design criteria for the proposed storage installation. These design criteria establish the design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this subpart establish minimum requirements for the design criteria for an ISFSI or MRS. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI or MRS.

(b) The MRS must be designed to store either spent fuel or solid high-level radioactive wastes. Liquid high-level radioactive wastes may not be received or stored in an MRS. If the MRS is a water-pool type facility, the solidified waste form shall be a durable solid with excellent leach resistance.

§ 72.92 Overall requirements.

(a) Quality Standards. Structures, systems, and components important to safety must be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) Protection against environmental conditions and natural phenomena.

(1) Structures, systems, and components important to safety must be designed to accommodate the effects of, and to be compatible with, site

characteristics and environmental conditions associated with normal operation, maintenance, and testing of the ISFSI or MRS and to withstand postulated accidents.

(2) Structures, systems, and components important to safety must be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunami, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components must reflect (i) appropriate consideration of the most severe of the natural phenomena reported for the site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and (ii) appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena. The ISFSI or MRS should also be designed to prevent massive collapse of building structures or the dropping of heavy objects as a result of building structural failure on to the spent fuel or high-level radioactive waste or on to structures, systems, and components important to safety.

(3) Capability must be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI or MRS is located over an aquifer which is a major water resource, measures must be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

(c) Protection against fires and explosions. Structures, systems, and components important to safety must be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-

resistant materials must be used wherever practical throughout the ISFSI or MRS, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI or MRS must include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) Sharing of structures, systems, and components. Structures, systems, and components important to safety must not be shared between an ISFSI or MRS and other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) Proximity of sites. An ISFSI or MRS located near other nuclear facilities must be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) Testing and maintenance of systems and components. Systems and components that are important to safety must be designed to permit inspection, maintenance, and testing.

(g) Emergency capability. Structures, systems, and components important to safety must be designed for emergencies. The design must provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) Confinement barriers and systems.

(1) The spent fuel cladding must be protected during storage against degradation that leads to gross ruptures or the fuel must be otherwise confined such that degradation of the fuel during storage will not pose operational safety problems with respect to its removal from storage. This may be accomplished by canning of consolidated fuel rods or unconsolidated assemblies or other means as appropriate.

(2) For underwater storage of spent fuel or high-level radioactive waste in which the pool water serves as a shield and a confinement medium for radioactive materials, systems for maintaining water purity and the pool water level must be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design must preclude installations of drains, permanently connected systems, and other features that could, by abnormal operations or failure, cause a significant loss of water. Pool water level equipment must be provided to alarm in a continuously manned location if the water level in the storage pools falls below a predetermined level.

(3) Ventilation systems and off-gas systems must be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(4) Storage confinement systems must have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions.

(5) The high-level radioactive waste must be packaged in a manner that allows handling and retrievability without the release of radioactive

materials to the environment or radiation exposures in excess of Part 20 limits. The package must be designed to confine the high-level radioactive waste for the duration of the license.

(i) Instrumentation and control systems. Instrumentation and control systems must be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions must be identified in the Safety Analysis Report.

(j) Control room or control area. A control room or control area, if appropriate for the ISFSI or MRS design, must be designed to permit occupancy and actions to be taken to monitor the ISFSI or MRS safely under normal conditions, and to provide safe control of the ISFSI or MRS under off-normal or accident conditions.

(k) Utility or other services.

(1) Each utility service system must be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety must include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services must be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions must be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to

allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

(4) An ISFSI or MRS which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with the other facility; however, the sharing of utilities and services or the physical connection must not significantly (i) increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or (ii) reduce the margin of safety as defined in the basis for any technical specifications of either facility.

(1) Retrievability. Storage systems must be designed to allow ready retrieval of spent fuel or high-level radioactive waste for further processing or disposal.

§ 72.93 Criteria for nuclear criticality safety.

(a) Design for criticality safety. Spent fuel handling, packaging, transfer, and storage systems must be designed to be maintained subcritical and to ensure that, before a nuclear criticality accident is possible at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety. The design of handling, packaging, transfer, and storage systems must include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the data and methods used in calculations and demonstrate safety for the handling, packaging, transfer and storage conditions and in the nature of the immediate environment under accident conditions.

(b) Methods of criticality control. When practicable the design of an ISFSI or MRS must be based on favorable geometry, permanently fixed neutron absorbing materials (poisons), or both. Where solid neutron absorbing materials are used, the design shall provide for positive means to verify their continued efficacy.

(c) Criticality Monitoring. A criticality monitoring system shall be maintained in each area where special nuclear material is handled, used, or stored which will energize clearly audible alarm signals if accidental criticality occurs. Underwater monitoring is not required when special nuclear material is handled or stored beneath water shielding. Monitoring of dry storage areas where special nuclear material is packaged in its stored configuration under a license issued under this subpart is not required.

§ 72.94 Criteria for radiological protection.

(a) Exposure control. Radiation protection systems must be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials. Structures, systems, and components for which operation, maintenance, and required inspections may involve occupational exposure must be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design must include means to:

- (1) Prevent the accumulation of radioactive material in those systems requiring access;
- (2) Decontaminate those systems to which access is required;

(3) Control access to areas of potential contamination or high radiation within the ISFSI or MRS;

(4) Measure and control contamination of areas requiring access;

(5) Minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and

(6) Shield personnel from radiation exposure.

(b) Radiological alarm systems. Radiological alarm systems must be provided in accessible work areas as appropriate to warn operating personnel of radiation and airborne radioactive material concentrations above a given setpoint and of concentrations of radioactive material in effluents above control limits. Radiation alarm systems must be designed with provisions for calibration and testing their operability.

(c) Effluent and direct radiation monitoring.

(1) As appropriate for the handling and storage system, effluent systems must be provided. Means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions must be provided for these systems. A means of measuring the flow of the diluting medium, either air or water, must also be provided.

(2) Areas containing radioactive materials must be provided with systems for measuring the direct radiation levels in and around these areas.

(d) Effluent control. The ISFSI or MRS must be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions.

Analyses must be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limits given in § 72.83. Analyses of design basis accidents must be made to show that releases to the general environment will be within the exposure limits given in § 72.85. Systems designed to monitor the release of radioactive materials must have means for calibration and testing their operability.

§ 72.95 Criteria for spent fuel, high-level radioactive waste, and other radioactive waste storage and handling.

(a) Spent fuel and high-level radioactive waste storage and handling systems. Spent fuel storage, high-level radioactive waste storage, and other systems that might contain or handle radioactive materials associated with spent fuel or high-level radioactive waste, must be designed to ensure adequate safety under normal and accident conditions. These systems must be designed with (1) a capability to test and monitor components important to safety, (2) suitable shielding for radiation protection under normal and accident conditions, (3) confinement structures and systems, (4) a heat-removal capability having testability and reliability consistent with its importance to safety, and (5) means to minimize the quantity of radioactive wastes generated.

(b) Waste treatment. Radioactive waste treatment facilities must be provided. Provisions must be made for the packaging of site-generated low-level wastes in a form suitable for storage onsite awaiting transfer to disposal sites.

§ 72.96 Criteria for decommissioning.

The ISFSI or MRS must be designed for decommissioning. Provisions must be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI or MRS is permanently decommissioned.

Subpart G--Quality Assurance

§ 72.100 Quality assurance requirements.

(a) Purpose. This subpart describes quality assurance requirements applying to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems, and components, and decommissioning that are important to safety. As used in this subpart, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to predetermined requirements.

(b) Establishment of program. Each licensee² shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria of this subpart, and satisfying any specific provisions

²While the term "licensee" is used in these criteria, the requirements are applicable to whatever design, construction, fabrication, assembly, and testing is accomplished with respect to structures, systems, and components prior to the time a license is issued.

which are applicable to the licensee's activities. The licensee shall execute the applicable criteria in a graded approach to an extent that is commensurate with the importance to safety. The quality assurance program must cover the activities identified in § 72.15(n) throughout the life of the licensed activity, from the site selection through decommissioning, prior to termination of the license.

(c) Approval of program. Prior to receipt of spent fuel at the ISFSI or spent fuel and high-level radioactive waste at the MRS, each licensee shall obtain Commission approval of its quality assurance program. Each licensee shall file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and how they will be satisfied, with the Director, Office of Nuclear Material and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(d) Previously approved programs. A Commission-approved quality assurance program which satisfies the applicable criteria of Appendix B to Part 50 of this chapter and which is established, maintained, and executed with regard to an ISFSI will be accepted as satisfying the requirements of paragraph (b) of this section. Prior to first use, the licensee shall notify the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, of its intent to apply its previously approved Appendix B program to ISFSI activities. The licensee shall identify the program by date of submittal to the Commission, docket number, and date of Commission approval.

§ 72.101 Quality assurance organization.

The licensee shall be responsible for the establishment and execution of the quality assurance program. The licensee may delegate to

others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program. The licensee shall clearly establish and delineate in writing the authority and duties of persons and organizations performing activities affecting the functions of structures, systems and components which are important to safety. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions. The quality assurance functions are (a) assuring that an appropriate quality assurance program is established and effectively executed and (b) verifying, by procedures such as checking, auditing, and inspection, that activities affecting the functions that are important to safety have been correctly performed. The persons and organizations performing quality assurance functions must have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The persons and organizations performing quality assurance functions shall report to a management level that ensures that the required authority and organizational freedom, including sufficient independence from cost and schedule considerations when these considerations are opposed to safety considerations, are provided. Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom. Irrespective of the

organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this section are being performed must have direct access to the levels of management necessary to perform this function.

§ 72.103 Quality assurance program.

(a) The licensee shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this subpart. The licensee shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance with these procedures throughout the period during which the ISFSI or MRS is licensed. The licensee shall identify the structures, systems, and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(b) The licensee, through its quality assurance program, shall provide control over activities affecting the quality of the identified structures, systems, and components to an extent commensurate with the importance to safety, and as necessary to ensure conformance to the approved design of each ISFSI or MRS. The licensee shall ensure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee shall take into

account the need for special controls, processes, test equipment, tools and skills to attain the required quality and the need for verification of quality by inspection and test.

(c) The licensee shall base the requirements and procedures of its quality assurance program on the following considerations concerning the complexity and proposed use of the structures, systems, or components:

- (1) The impact of malfunction or failure of the item on safety;
- (2) The design and fabrication complexity or uniqueness of the item;
- (3) The need for special controls and surveillance over processes and equipment;
- (4) The degree to which functional compliance can be demonstrated by inspection or test; and
- (5) The quality history and degree of standardization of the item.

(d) The licensee shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to ensure that suitable proficiency is achieved and maintained. The licensee shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

§ 72.105 Design control.

(a) The licensee shall establish measures to ensure that applicable regulatory requirements and the design basis, as specified in the license application for those structures, systems, and components to which this

section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to ensure that appropriate quality standards are specified and included in design documents and that deviations from standards are controlled. Measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the functions of the structures, systems, and components which are important to safety.

(b) The licensee shall establish measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures must include the establishment of written procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews, alternate or simplified calculational methods, or by a suitable testing program. For the verifying or checking process, the licensee shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, the licensee shall include suitable qualification testing of a prototype or sample unit under the most adverse design conditions. The licensee shall apply design control measures to items such as the following: criticality physics, radiation, shielding, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice

inspection, maintenance, and repair; features to facilitate decontamination; and delineation of acceptance criteria for inspections and tests.

(c) The licensee shall subject design changes, including field changes, to design control measures commensurate with those applied to the original design. Changes in the conditions specified in the license require NRC approval.

§ 72.107 Procurement document control.

The licensee shall establish measures to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the licensee or by its contractors or subcontractors. To the extent necessary, the licensee shall require contractors or subcontractors to provide a quality assurance program consistent with the applicable provisions of this subpart.

§ 72.109 Instructions, procedures, and drawings.

The licensee shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

§ 72.111 Document control.

The licensee shall establish measures to control the issuance of documents such as instructions, procedures, and drawings, including changes, which prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed. These measures must ensure that changes to documents are reviewed and approved.

§ 72.113 Control of purchased material, equipment, and services.

(a) The licensee shall establish measures to ensure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.

(b) The licensee shall have available documentary evidence that material and equipment conform to the procurement specifications prior to installation or use of the material and equipment. The licensee shall retain or have available this documentary evidence for the life of ISFSI or MRS. The licensee shall ensure that the evidence is sufficient to identify the specific requirements met by the purchased material and equipment.

(c) The licensee or designee shall assess the effectiveness of the control of quality by contractors and subcontractors at intervals

consistent with the importance, complexity, and quantity of the product or services.

§ 72.115 Identification and control of materials, parts, and components.

The licensee shall establish measures for the identification and control of materials, parts, and components. These measures must ensure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item as required, throughout fabrication, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective materials, parts, and components.

§ 72.117 Control of special processes.

The licensee shall establish measures to ensure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

§ 72.119 Licensee inspection.

The licensee shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or

products processed must be performed for each work operation where necessary to assure quality. If direct inspection of processed material or products cannot be carried out, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when quality control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the licensee's designated representative and beyond which work should not proceed without the consent of its designated representative, are required, the specific hold points must be indicated in appropriate documents.

§ 72.121 Test control.

The licensee shall establish a test program to ensure that all testing-required to demonstrate that the structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures that incorporate the requirements of this part and the requirements and acceptance limits contained in the ISFSI or MRS license. The test procedures must include provisions for assuring that all prerequisites for the given test are met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. The licensee shall document and evaluate the test results to ensure that test requirements have been satisfied.

§ 72.123 Control of measuring and test equipment.

The licensee shall establish measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities

affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

§ 72.125 Handling, storage, and shipping control.

The licensee shall establish measures to control, in accordance with work and inspection instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, and specific moisture content and temperature levels must be specified and provided.

§ 72.127 Inspection, test, and operating status.

(a) The licensee shall establish measures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the ISFSI or MRS. These measures must provide for the identification of items which have satisfactorily passed required inspections and tests where necessary to preclude inadvertent bypassing of the inspections and tests.

(b) The licensee shall establish measures to identify the operating status of structures, systems, and components of the ISFSI or MRS, such as tagging valves and switches, to prevent inadvertent operation.

§ 72.129 Nonconforming materials, parts or components.

The licensee shall establish measures to control materials, parts, or components that do not conform to the licensee's requirements in order to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation,

segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

§ 72.131 Corrective action.

The licensee shall establish measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures must ensure that the cause of the condition is determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

§ 72.133 Quality assurance records.

The licensee shall maintain sufficient records to furnish evidence of activities affecting quality. The records must include the following: design records, records of use and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records must include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records must, at a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any noted deficiencies. Records must be identifiable and retrievable. Records pertaining to the design, fabrication, erection, testing, maintenance, and use of structures, systems, and components important to

safety shall be maintained by or under the control of the licensee until the Commission terminates the license.

§ 72.135 Audits.

The licensee shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audited results must be documented and reviewed by management having responsibility in the area audited. Follow-up action, including re-audit of deficient areas, must be taken where indicated.

Subpart H--Physical Protection

§ 72.201 Physical security plan.

The licensee shall establish a detailed plan for security measures for physical protection. The licensee shall retain a copy of the current plan as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the plan is superseded, retain the superseded material for three years after each change. This plan must consist of two parts. Part I must demonstrate how the applicant plans to comply with the applicable requirements of Part 73 of this chapter and during transportation to and from the proposed ISFSI or MRS and must include the design for physical protection and the licensee's safeguards contingency plan and guard training plan. Part II must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

§ 72.202 Design for physical protection.

The design for physical protection must show the site layout and the design features provided to protect the ISFSI or MRS from sabotage. It must include:

(a) The design criteria for the physical protection of the proposed ISFSI or MRS;

(b) The design bases and the relation of the design bases to the design criteria submitted pursuant to paragraph (a) of this section; and

(c) Information relative to materials of construction, equipment, general arrangement, and proposed quality assurance program sufficient to provide reasonable assurance that the final security system will conform to the design bases for the principal design criteria submitted pursuant to paragraph (a) of this section.

§ 72.203 Safeguards contingency plan.

(a) The requirements of the licensee's safeguards contingency plan for dealing with threats and radiological sabotage must be as defined in § 73.40(b) of this chapter. This plan must include Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix, the first four categories of information relating to nuclear facilities licensed under Part 50 of this chapter. (The fifth category of information, Procedures, does not have to be submitted for approval.)

(b) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C to 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the licensee's safeguards contingency plan. The licensee shall retain a copy of the current procedures as a record until the Commission terminates

the license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

§ 72.204 Change to physical security and safeguards contingency plans.

(a) The licensee shall make no change that would decrease the safeguards effectiveness of the physical security plan, guard training plan or the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix) contained in the licensee safeguards contingency plan without prior approval of the Commission. A licensee desiring to make a change must submit an application for a license amendment pursuant to § 72.39.

(b) The licensee may, without prior Commission approval, make changes to the physical security plan, guard training plan, or the safeguards contingency plan, if the changes do not decrease the safeguards effectiveness of these plans. The licensee shall maintain records of changes to any such plan made without prior approval for a period of 3 years from the date of the change and shall furnish to the Regional Administrator of the appropriate NRC Regional Office specified in Appendix A of Part 73 of this Chapter, with a copy to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a description of each change within two months after the change is made.

Subpart I--Training and Certification of Personnel

§ 72.301 Operator requirements.

Operation of equipment and controls that have been identified as important to safety in the Safety Analysis Report and in the license must

be limited to trained and certified personnel or be under the direct visual supervision of an individual with training and certification in the operation. Supervisory personnel who personally direct the operation of equipment and controls that are important to safety must also be certified in such operations.

§ 72.302 Operator training and certification program.

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI or MRS personnel. This program must be submitted to the Commission for approval with the license application.

§ 72.303 Physical requirements.

The physical condition and the general health of personnel certified for the operation of equipment and controls that are important to safety must not be such as might cause operational errors that could endanger other in-plant personnel or the public health and safety. Any condition that might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, if appropriate provisions are made to accommodate such defect.

Subpart J--Provision of MRS Information to State Governments
and Indian Tribes

§ 72.310 Provision of MRS information.

(a) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee shall provide to the Governor and legislature

of any State in which a monitored retrievable storage facility authorized under section 141 of the Nuclear Waste Policy Act of 1982 is or may be located, and to the Chief Executive of the local municipality, and to the Governors of any contiguous States and to the governing body of any affected Indian tribe, timely and complete information regarding determinations or plans made by the Commission with respect to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility.

(b) Notwithstanding paragraph (a) of this section, the Director or the Director's designee is not required to distribute any document to any entity if, with respect to such document, that entity or its counsel is included on a service list prepared pursuant to Part 2 of this chapter.

(c) Copies of all communications by the Director or the Director's designee under this section shall be placed in the Commission's Public Document Room and shall be furnished to DOE.

§ 72.312 Participation in license reviews.

State and local governments and affected Indian tribes may participate in license reviews as provided in Subpart G of Part 2 of this chapter.

§ 72.314 Notice to States.

If the Governor and legislature of a State have jointly designated on their behalf a single person or entity to receive notice and information from the Commission under this part, the Commission will provide such notice and information to the jointly designated person or entity instead of the Governor and the legislature separately.

§ 72.316 Representation.

Any person who acts under this subpart as a representative for a State (or for the Governor or legislature thereof) or for an affected Indian tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in such representative capacity.

Conforming Amendments

PART 2 - RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

2. The authority citation for Part 2 is revised to read as follows:
 Authority: Secs. 161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87-615, 76 Stat. 409 (42 U.S.C. 2241); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552.

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 105, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871). Sections 2.102, 2.103, 2.104, 2.105, 2.721 also issued under secs. 102, 103, 104, 105, 183, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Sections 2.200-2.206 also issued under secs. 186, 234, 68 Stat. 955, 83 Stat. 444, as amended (42 U.S.C. 2236, 2282); sec. 206, 88 Stat. 1246 (42 U.S.C. 5846). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 as amended (42 U.S.C. 4332). Sections 2.700a, 2.719 also issued under

5 U.S.C. 544. Sections 2.754, 2.760, 2.770 also issued under 5 U.S.C. 557. Section 2.764 and Table 1A of Appendix C also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.800 and 2.808 also issued under 5 U.S.C. 553. Section 2.809 also issued under 5 U.S.C. 553 and sec. 29, Pub. L. 85-256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Appendix A also issued under sec. 6, Pub. L. 91-560, 84 Stat. 1473 (42 U.S.C. 2135). Appendix B also issued under sec. 10, Pub. L. 99-240, 99 Stat. 1859 (42 U.S.C. 2021j).

3. In § 2.104, paragraph (e) is revised to read as follows:

§ 2.104. Notice of hearing.

* * * * *

(e) The Secretary will give timely notice of the hearing to all parties and to other persons, if any, entitled by law to notice. The Secretary will transmit a notice of hearing on an application for a license for a production or utilization facility, for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, for a license under Part 61 of this chapter, for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter, and for a license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) to the governor or other appropriate official of the State and to the chief executive of

the municipality in which the facility is to be located or the activity is to be conducted or, if the facility is not to be located or the activity conducted within a municipality, to the chief executive of the county (or to the Tribal organization, if it is to be so located or conducted within an Indian reservation). The Secretary will transmit a notice of hearing on an application for a license under Part 72 of this chapter to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS) to the same persons who received the notice of docketing under § 72.11(e) of this chapter.

4. In § 2.105, paragraph (a) is amended by deleting the word "or" at the end of paragraph (6), by redesignating paragraphs (7), (8) and (9) as paragraphs (9), (10) and (11) and by adding new paragraphs (7) and (8) to read as follows:

§ 2.105 Notice of proposed action.

(a) * * *

* * * * *

(7) A license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) or to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS);

(8) An amendment to a license specified in paragraph (a)(7) of this section when such an amendment presents a genuine issue as to whether the health and safety of the public will be significantly affected; or

(9) * * *

(10) * * *

(11) * * *

* * * * *

5. In § 2.764, paragraph (c) is revised to read as follows:

§ 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.

* * * * *

(c) An initial decision directing the issuance of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) under 10 CFR Part 72 shall become effective only upon order of the Commission. The Director of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) under 10 CFR Part 72 until expressly authorized to do so by the Commission.

* * * * *

6. In Appendix C, Table 1A, is revised to read as follows:

Appendix C - General Statement of Policy and Procedure for NRC
Enforcement Actions

* * * * *

Table 1A -- Base Civil Penalties

	Plant Operations, construc- tion, health physics and and EP	Safeguards	Transportation	
			Greater than Type A quantity ¹	Type A quantity or less ²
a. Power reactors	\$100,000	\$100,000	\$100,000	\$5,000
b. Test reactors	10,000	10,000	10,000	2,000
c. Research reactors and critical facilities	5,000	5,000	5,000	1,000
d. Fuel fabricators and industrial processors ³	25,000	100,000 ⁴	25,000	5,000
e. Mills and uranium conversion facilities	10,000	--	5,000	2,000
f. Industrial users of material ⁵	10,000	--	5,000	2,000
g. Waste disposal licensees	10,000	--	5,000	2,000
h. Academic or medical institutions ⁶	5,000	--	2,500	1,000
i. Independent spent fuel and monitored retrievable storage installations	25,000	100,000	25,000	5,000
j. Other material licensees	1,000	--	2,500	1,000

¹Includes irradiated fuel, high level waste, unirradiated fissile material and any other quantities requiring Type B packaging.

²Includes low specific activity waste (LSA), low level waste, Type A packages, and excepted quantities and articles.

³Large firms engaged in manufacturing (or distribution of byproduct, source, or special nuclear material).

⁴This amount refers to Category 1 licensees (or defined in 10 CFR 73.2(bb)). Licensed fuel fabricators not authorized to possess Category 1 material have a base penalty amount of \$50,000.

⁵Includes industrial radiographers, nuclear pharmacies, and other industrial users.

⁶This applies to nonprofit institutions not otherwise categorized under sections "a" through "g" in this table.

PART 19 - NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

7. The authority citation for Part 19 is revised to read as follows:

Authority: Secs. 53, 63, 81, 103, 104, 161, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2093, 2111, 2133, 2134, 2201, 2236, 2282); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841). Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 19.11(a), (c), (d), and (e) and 19.12 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 19.13 and 19.14(a) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

8. Section 19.2 is revised to read as follows:

§ 19.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed by the Nuclear Regulatory Commission pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

9. In § 19.3, paragraph (d) is revised to read as follows:

§ 19.3 Definitions.

* * * * *

(d) "License" means a license issued under the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including

licenses to operate a production or utilization facility pursuant to Part 50 of this chapter. "Licensee" means the holder of such a license.

* * * * *

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

10. The authority citation for Part 20 is revised to read as follows:

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 68 Stat. 930, 933, 935, 936, 937, 948, as amended (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 20.408 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended, (42 U.S.C. 2273), §§ 20.101, 20.102, 20.103(a), (b), and (f), 20.104(a) and (b), 20.105(b), 20.106(a), 20.201, 20.202(a), 20.205, 20.207, 20.301, 20.303, 20.304, and 20.305 are issued under sec. 161b, 68 Stat. 948, as amended, (42 U.S.C. 2201(b)); and §§ 20.102, 20.103(e), 20.401-20.407, 20.408(b) and 20.409 are issued under sec. 161o, 68 Stat. 950, as amended, (42 U.S.C. 2201(o)).

11. Section 20.2 is revised to read as follows:

§ 20.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter,

including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

12. In § 20.408, paragraph (a)(5) is revised to read as follows:

§ 20.408 Reports of personnel monitoring on termination of employment or work.

(a) This section applies to each person licensed by the Commission to:

* * * * *

(5) Possess spent fuel in an independent spent fuel storage installation (ISFSI) or possess spent fuel or high level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter; or

* * * * *

PART 21 - REPORTING OF DEFECTS AND NONCOMPLIANCE

13. The authority citation for Part 21 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 234, 83 Stat 444, as amended, (42 U.S.C. 2201, 2282); secs. 201, as amended, 206, 88 Stat 1242, as amended, 1246 (42 U.S.C. 5841, 5846).

Sec. 21.2 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161)

For the purposes of sec. 223, 58 Stat. 958, as amended (42 U.S.C. 2273); §§ 21.6, 21.21(a) and 21.31 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 21.21, 21.41 and 21.51 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

14. Section 21.2 is revised to read as follows:

§ 21.2 Scope.

The regulations in this part apply, except as specifically provided otherwise in Parts 31, 34, 35, 39, 40, 60, 61, 70, or 72 of this chapter, to each individual, partnership, corporation, or other entity licensed pursuant to the regulations in this chapter to possess, use, and/or transfer within the United States source material, byproduct material, special nuclear material, and/or spent fuel and high-level radioactive waste, or to construct, manufacture, possess, own, operate and/or transfer within the United States, any production or utilization facility, or independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS), and to each director [see § 21.3(f)] and responsible officer [see § 21.3(j)] of such a licensee. The regulations in this part apply also to each individual, corporation, partnership or other entity doing business within the United States, and each director and responsible officer of such organization, that constructs [see § 21.3(c)] a production or utilization facility licensed for manufacture, construction or operation [see § 21.3(h)] pursuant to Part 50 of this chapter, an independent spent fuel storage installation (ISFSI) for the storage of spent fuel licensed pursuant to Part 72 of this chapter or a monitored retrievable storage installation (MRS) for the storage of spent fuel or high-level radioactive waste licensed pursuant to Part 72 of this chapter, or supplies [see § 21.3(1)] basic components [see § 21.3(a)] for a facility or activity licensed, other than for export, under Parts 30, 39, 40, 50, 60, 61, 70, 71, or 72 of this chapter. Nothing in these regulations should be deemed to preclude either an individual or a manufacturer/supplier of a commercial

grade item [see § 21.3(a-1)] not subject to the regulations in this part from reporting to the Commission a known or suspected defect or failure to comply and, as authorized by law, the identity of anyone so reporting will be withheld from disclosure.¹

PART 51 - ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

15. The authority citation for Part 51 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended (42 U.S.C. 2201); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041. Sections 51.20, 51.30, 51.60, 51.61, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021).

¹NRC Regional Offices will accept collect telephone calls from individuals who wish to speak to NRC representatives concerning nuclear safety-related problems. The location and telephone numbers (for nights and holidays as well as regular hours) are listed below:

Region:

I	(Philadelphia)	(215) 337-5000
II	(Atlanta)	(404) 331-4503
III	(Chicago)	(312) 790-5500
IV	(Dallas)	(817) 860-8100
IV	Uranium Recovery Field Office (Denver) . .	(303) 236-2805
V	(San Francisco)	(415) 943-3700

16. In § 51.20, paragraphs (b)(9) and (b)(10) are revised to read as follows:

§ 51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements.

* * * * *

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

* * * * *

(9) Issuance of a license pursuant to Part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor, or for the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS).

(10) Issuance of a license amendment authorizing the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

17. In § 51.30, a new paragraph (c), is added to read as follows:

§ 51.30 Environmental assessment.

* * * * *

(c) An environmental assessment for a proposed action regarding a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the Nuclear Waste Policy Act of 1982 (96 Stat. 2242).

18. In § 51.60, paragraphs (a), (b)(1)(iii) and (b)(4) are revised to read as follows:

§ 51.60. Environmental report - Materials licenses.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to Parts 30, 32, 33, 34, 35, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1)-(b)(6) of this section, shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report" or "Supplement to Applicant's Environmental Report," as appropriate. The "Applicant's Environmental Report" shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

(b) * * *

(1) * * *

*

*

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*

(iii) Storage of spent fuel in an independent spent fuel storage installation (ISFSI) or the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

(4) Amendment of a license to authorize the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

19. Section 51.61 is revised to read as follows:

§ 51.61 Environmental report - Independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report - ISFSI License" or "Applicant's Environmental Report - MRS License," as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in Subpart E of Part 72 of this chapter. Unless otherwise required by the

Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), no discussion of the environmental impact of the storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required in an environmental report submitted by an applicant for an initial license for storage of spent fuel in an ISFSI, or any amendment thereto.

20. In § 51.80, paragraph (b) is revised to read as follows:

§ 51.80 Draft environmental impact statement - Material license.

* * * * *

(b)(1) Independent spent fuel storage installation (ISFSI). Unless otherwise determined by the Commission and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a draft environmental impact statement on the issuance of an initial license for storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel only for the term of the license or amendment applied for.

(2) Monitored retrievable storage installation (MRS). As provided in sections 141(c), (d), and (e) of the Nuclear Waste Policy Act of 1982 (NWPAA) (96 Stat. 2242, 2243) a draft environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

21. In § 51.97, a new paragraph (b) is added to read as follows:
 § 51.97 Final environmental impact statement - Material license.

* * * * *

(b) Monitored retrievable storage facility (MRS). As provided in sections 141(c), (d), and (e) of the Nuclear Waste Policy Act of 1982 (NWPAA) (96 Stat. 2242, 2243) a final environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

PART 70 - DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

22. The authority citation for Part 70 is revised to read as follows:

Authority: Sections 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 70.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237).

Section 70.62 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 70.3, 70.19(c), 70.21(c), 70.22(a), (b), (d)-(k), 70.24 (a) and (b), 70.32 (a)(3), (5) and (6), (d), and (i), 70.36, 70.39 (b) and (c), 70.41(a), 70.42(a) and (c), 70.56, 70.57 (b), (c), and (d), 70.58 (a)-(g)(3), and (h)-(j) are issued under sec. 161b, 68 Stat. 948 as amended (42 U.S.C. 2201(b)); §§ 70.7, 70.20a (a) and (d), 70.20b (c) and (e), 70.21(c), 70.24(b), 70.32(a)(6), (c), (d), (e), and (g), 70.36, 70.51(c)-(g), 70.56, 70.57(b) and (d), 70.58 (a)-(g)(3) and (h)-(j) are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 70.20b (d) and (e), 70.38, 70.51(b) and (i), 70.52, 70.53, 70.54, 70.55, 70.58(g)(4), (k) and (l), 70.59, and 70.60(b) and (c) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

23. In § 70.1, paragraph (c) is revised to read as follows:

§ 70.1 Purpose.

* * * * *

(c) The regulations in Part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess (1) spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI), or (2) spent fuel, high-level radioactive waste, and other radioactive materials associated with the storage in a monitored retrievable storage installation (MRS), and the terms and conditions under which the Commission will issue such licenses.

24. In § 70.20a, paragraph (b) is revised to read as follows:

§ 70.20a General license to possess special nuclear material for transport.

* * * * *

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to Parts 30 through 35, 39, 40, 50, 72, 110, or other sections of this part.

* * * * *

PART 73 - PHYSICAL PROTECTION OF PLANTS AND MATERIALS

25. The authority citation for Part 73 is revised to read as follows:

Authority: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); secs. 201, as amended, 204, 88 Stat. 1242, as amended, 1245 (42 U.S.C. 5841, 5844).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Sec. 73.37(f) also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876 (42 U.S.C. 2169).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), §§ 73.21, 73.37(g) and 73.55 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 73.20, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, 73.57, and 73.67 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i));

and §§ 73.20(c)(1), 73.24(b)(1), 73.26(b)(3), (h)(6), and (k)(4), 73.27(a) and (b), 73.37(f), 73.40(b) and (d), 73.46(g)(6) and (h)(2), 73.50(g)(2), (3)(iii)(B) and (h), 73.55(h)(2), and (4)(iii)(B), 73.57, 73.70, 73.71 and 73.72 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

26. In § 73.1, paragraph (b)(6) is revised to read as follows:

§ 73.1 Purpose and scope.

* * * * *

(b) * * *

* * * * *

(6) This part prescribes requirements for the physical protection of spent fuel stored in either an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) licensed under Part 72 of this chapter.

* * * * *

PART 75 - SAFEGUARDS ON NUCLEAR MATERIAL - IMPLEMENTATION OF US/IAEA AGREEMENT

27. The authority citation for Part 75 is revised to read as follows:

Authority: Secs. 53, 63, 103, 104, 122, 161, 68 Stat. 930, 932, 936, 937, 939, 948, as amended (42 U.S.C. 2073, 2093, 2133, 2134, 2152, 2201); sec. 201, as amended, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Section 75.4 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), the provisions of this part are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

28. In § 75.4, paragraph (k)(4) is revised to read as follows:

§ 75.4 Definitions.

As used in this part:

* * * * *

(k) "Installation" means:

* * * * *

(4) An independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) as defined in § 72.3 of this chapter; or

* * * * *

PART 150 - EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY
IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER
SECTION 274

29. The authority citation for Part 150 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 274, 73 Stat. 688, as amended (42 U.S.C. 2201, 2021); sec. 201, as amended, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Sections 150.3, 150.15, 150.15a 150.31, 150.32 also issued under secs. 11e(2), 81, 68 Stat. 923, 935, as amended, secs. 83, 84, 92 Stat. 3033, 3039 (42 U.S.C. 2014e(2), 2111, 2113, 2114). Section 150.14 also

issued under sec. 53, 68 Stat. 930, as amended (42 U.S.C. 2073). Section 150.15 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 150.30 also issued under sec. 234, 83 Stat. 444 (42 U.S.C. 2282).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 150.20(b)(2)-(4) and 150.21 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); § 150.14 is issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 150.16-150.19 and 150.20(b)(1) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

30. In § 150.15, paragraph (a)(7) is revised to read as follows:
§ 150.15 Persons not exempt.

(a) * * *

* * * * *

(7) The storage of (i) spent fuel in an independent spent fuel storage installation (ISFSI) or (ii) spent fuel and high level radioactive waste in a monitored retrievable storage installation (MRS) licensed pursuant to Part 72 of this chapter.

* * * * *

Dated at Washington, DC, this ____ day of _____, 1987.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,
Secretary of the Commission.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

September 17, 1987

The Honorable Lando W. Zech, Jr.
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Zech:

SUBJECT: ACRS ACTION ON THE PROPOSED FINAL RULE AMENDMENTS TO 10 CFR
PART 72, "LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE
OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE"

During the 329th meeting of the ACRS, September 10-12, 1987, we discussed a report from our Subcommittee on Spent Fuel Storage regarding the proposed Final Rule Amendments to 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

As a result of this discussion, we concur with the NRC Staff's proposal to issue the subject Final Rule Amendments. However, we note that operators of equipment and controls at facilities licensed under 10 CFR Part 72 would not be licensed by the NRC but are required by NRC regulation to be certified by the licensee. Because these facilities could contain large quantities of special nuclear material, qualification and certification of operators is appropriate. Although NRC requires certification of operators, we are not aware of any NRC guidance or criteria that would be used to determine the adequacy of the qualifications, training, continuing training, and certification of these operators. We believe that NRC should develop such guidance and criteria, and we would like to review them before the licensing of such facilities.

Sincerely,

William Kerr
Chairman

Reference:

Memorandum from Robert Bosnak, Deputy Director, Office of Nuclear Regulatory Research, dated July 14, 1987, with enclosed proposed Final Rule Amendments to 10 CFR Parts 2, 19, 20, 21, 70, 73, 75, 150 and Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

ENCLOSURE 2

DRAFT CONGRESSIONAL LETTER

Dear Mr. Chairman:

Enclosed for the information of the Subcommittee on _____ is a copy of a Federal Register Notice of Final Rulemaking pertaining primarily to the storage of spent nuclear fuel and high-level radioactive waste in monitored retrievable storage facilities.

The storage of spent fuel is presently licensed under 10 CFR Part 72, "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation," which was published as a final rule on November 12, 1980 (45 FR 74693). This final rule is intended to incorporate certain provisions of the Nuclear Waste Policy Act of 1982 (NWPA) concerning (1) the Federal interim storage program for spent fuel and (2) the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage facility. The final rule is the first step in the procedure to ensure that the Commission has in place the appropriate regulations to fulfill the requirements contained in the NWPA.

On May 27, 1986, the proposed revision to 10 CFR Part 72 relating to MRS licensing was published in the Federal Register (51 FR 19106) for comment. Modifications to certain sections of existing Part 72 were also proposed. They result from experience since Part 72 was made effective on November 28, 1980 and concern spent fuel cladding degradation, general design criteria, quality assurance, and emergency planning. The comment period expired on August 25, 1986.

The NRC received 195 comment letters from utilities, engineering companies, State offices, environmental groups, private citizens, and a member of the U.S. House of Representatives. The comment letters from private citizens numbered about 145. (Some of these were signed by several individuals or were submitted

on behalf of private business firms.) From the comment letters received, the staff identified 27 separate topics to which specific responses were directed. Comments were also received which addressed the original rule, not the proposed amendment. In response to the comments, several changes have been made to the proposed rule. The majority of these changes are mainly clarifying in nature.

The notice of final rulemaking is being transmitted to the Office of the Federal Register and will be made effective 30 days following publication in the Federal Register.

Also enclosed are copies of a public announcement that will be released by the Commission in the next few days.

Sincerely,

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosures:

1. Notice of Final Rulemaking
2. Public Announcement

NRC ISSUES REGULATIONS FOR
MONITORED RETRIEVABLE STORAGE FACILITIES

The Nuclear Regulatory Commission is amending its regulations to set out requirements for licensing the storage of spent nuclear fuel and high-level radioactive waste in monitored retrievable storage (MRS) facilities that may be built by the Department of Energy.

An MRS facility would be used for the long-term storage of spent fuel or high-level radioactive waste resulting from civilian nuclear activities. It would provide a backup option for the handling and storage of such materials if there should be delays in DOE's development of a facility for permanent disposal. It could also serve other functions in the DOE waste management program, such as packaging of spent fuel and high-level radioactive waste in preparation for eventual shipment to a repository for disposal.

Under the Nuclear Waste Policy Act of 1982, if Congress decided to authorize construction of such a facility, it would be subject to licensing by the NRC.

A proposed rule on MRS facilities was published in the Federal Register for public comment on May 27, 1986. As a result of the comments received, the Commission has indicated that, at the request of the state where an MRS might be located, the Commission will enter into discussions with the host state for the purpose of negotiating an agreement to perform inspections or other functions on a cooperative basis as the Commission deems appropriate.

Other details of the amendments, which are principally to Part 72 of the Commission's regulations, are contained in a Federal Register notice published on _____.

REGULATORY ANALYSIS
For Revision of 10 CFR Part 72

1. Statement of the Problem

On November 12, 1980, 10 CFR Part 72, "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation (ISFSI)," was published in the Federal Register (45 FR 74693) as a final rule. This regulation established requirements, procedures, and criteria for the issuance of licenses to possess power reactor spent fuel in an ISFSI. On January 7, 1983, the Nuclear Waste Policy Act of 1982 (NWPAct) was signed into law (Public Law 97-425). The NWPAct, among other things, provides for the full utilization of available spent nuclear fuel pools at the site of each civilian nuclear power reactor to the extent practical, the addition of new spent fuel storage capacity where practical at the site of such reactor for interim storage of spent fuel, the establishment of a Federally owned and operated system for the interim storage of spent nuclear fuel at one or more facilities owned by the Federal Government (with not more than 1,900 metric tons of additional capacity) to prevent disruptions in the orderly operation of any civilian nuclear power plant that cannot reasonably provide adequate spent fuel storage capacity at the site of such reactor when needed, and the submission of a proposal to Congress by the Secretary of Energy of a study on the need for and the feasibility of and a proposal for construction of one or more monitored retrievable storage installations (MRS). If Congress authorizes an MRS, it would be constructed and operated by the Department of Energy (DOE) and be subject to licensing by the Commission under section 141 of the NWPAct.

Section 135 of the NWPAct requires that storage capacity provided by the Department of Energy for the interim storage of spent fuel be licensed by the Commission, except for those facilities that were owned by the Federal Government on the date of enactment of the NWPAct (January 7, 1983). Eligibility for the use of government interim storage facilities will be determined by the Commission in accordance with the procedures and criteria contained in 10 CFR

Parts 1 and 53. The use of modular or mobile spent fuel storage equipment, or the construction of storage capacity at any site of a civilian nuclear power reactor by the Federal government will require licensing by the Commission. Section 141 of the NWA provides that any monitored retrievable storage installation shall be subject to licensing by the Commission. Additions to Part 72 are necessary to incorporate this, and other, requirements of NWA.

Changes in Part 72 are also desirable to clarify issues concerning general design criteria, emergency planning, and quality assurance since it was made effective on 11/28/80.

2. Objective

To promulgate proposed regulations incorporating the provisions of Subtitles B and C of the Nuclear Waste Policy Act of 1982, and other changes resulting from licensing experience since Part 72 was made effective (11/28/80).

3. Alternatives

The alternatives considered in developing this rulemaking action are as follows:

3.1 No action

The Nuclear Waste Policy Act of 1982 mandates that the Commission license certain activities related to storage of spent nuclear fuel and high-level radioactive waste. Regulations covering some of these activities are not in place, thus, rulemaking action is necessary.

3.2 Procedural alternatives

Procedural alternatives considered are amendment of licenses, use of regulatory guides only, and amendment of regulations and preparation of regulatory guides. A major purpose of this proposed rulemaking is to incorporate licensing of storage of spent nuclear fuel and high-level radioactive waste in a monitored retrieval storage facility (MRS) owned and operated by the Department of Energy

(DOE). No license has been issued to DOE for an MRS, thus, amendment of licenses is not an appropriate alternative. Regulatory guides do not carry the force of law, so this alternative is not appropriate. Amendment of regulations is the preferred action. The Commission could amend its regulations by adding a new part to provide a regulatory framework for licensing MRS, if approved by Congress. However, such a procedure would duplicate a large part of the regulations in 10 CFR Part 72. The technical and procedural requirements of Part 72 are generally applicable to an MRS. To ensure consistency and to avoid unnecessary duplication of regulations the preferred course of action is revision of Part 72. Regulatory guides, concerning specific requirements in the proposed rule, are planned to be issued for public comment following publication of the proposed rule in the Federal Register.

3.3 Timing alternatives

The Commission could await further development of the MRS option before proposing its rule. However, this approach could result in unnecessary delay in promulgating an effective rule that could be used for reviewing a license application if Congress authorizes construction of an MRS. To ensure timely development of these regulations and to preserve an opportunity for public comment, the Commission has chosen to publish a proposed rule now.

4. Consequences

The existing 10 CFR Part 72 was written to provide regulatory requirements for licensing spent fuel storage independent of a nuclear power plant's spent fuel pool or in an ISFSI constructed for this purpose. If the MRS is authorized by Congress, DOE will be subject to the NRC licensing process. Additions are needed to incorporate the specific issues which have been raised by the NWPA. The basic requirements for the storage of spent fuel in an ISFSI are not being changed. Requirements are being added which cover the storage of spent fuel and high-level radioactive waste in an MRS. Promulgation of the proposed Part 72 would enable the staff to carry out the NRC's responsibilities in a more efficient and effective manner.

5. Decision rationale

Section 141 of the NWPA requires that the Nuclear Regulatory Commission license the monitored retrievable storage installation (MRS) in the event that Congress authorizes its construction. Based on this Congressional requirement, the Commission should proceed to publish the proposed 10 CFR Part 72, and related conforming amendments, for public comment.

6. Implementation

The NWPA requires DOE to submit a detailed study of the need for and feasibility of, and submit to the Congress a proposal for, the construction of one or more monitored retrievable storage installations. (section 141(b) of the NWPA). DOE prepared a proposal, which was submitted to the Commission for review and comment prior to submittal to Congress. In order to ensure that the Commission has the necessary rules in place when needed, the Commission is publishing the proposed rule now.

MARCH 15, 1988

C O R R E C T I O N N O T I C E

TO ALL HOLDERS OF

SECY-87-298 - FINAL RULE FOR REVISION TO 10 CFR PART 72 ENTITLED,
"LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT
NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE," AND CONFORMING
AMENDMENTS TO 10 CFR PARTS 2, 19, 20, 21, 51, 70, 73, 75, AND
150

(COMMISSION ACTION ITEM)

ENCLOSURE 1 TO SECY-87-298 SHOULD BE REPLACED WITH THE ATTACHED
ENCLOSURE. THE REVISIONS IN THE ATTACHED FRN WERE MADE IN
RESPONSE TO THE DECEMBER 22, 1987, ENACTMENT OF THE NUCLEAR
WASTE POLICY AMENDMENT ACT OF 1987. (P.L. 100-203, OMNIBUS
BUDGET RECONCILIATION ACT FOR FISCAL YEAR 1988, TITLE V,
SUBTITLE A.). ACCURATE CITATIONS TO RELEVANT SECTIONS OF THAT
ACT WILL BE ADDED AS SOON AS THE SLIP LAW TEXT OF P.L. 100-203
BECOMES AVAILABLE.

ATTACHMENT:
AS STATED

THE SECRETARIAT

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 2, 19, 20, 21, 51, 70, 72, 73, 75 and 150

Licensing Requirements for the Independent Storage of Spent
Nuclear Fuel and High-Level Radioactive Waste

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Waste Policy Act of 1982 (NWPAA) requires that monitored retrievable storage facilities (MRS) for spent nuclear fuel and high-level radioactive waste (HLW) be subject to licensing by the Nuclear Regulatory Commission (NRC), if Congress approves their construction. The NRC is adding language to its regulations in 10 CFR Part 72 to provide for licensing the storage of spent nuclear fuel and HLW in an MRS. The Commission intends to have the appropriate regulation to fulfill the requirements of the NWPAA in place in a timely manner. The rule would also clarify certain issues that have arisen since Part 72 was made effective on November 28, 1980 and incorporate other changes resulting from public comments received.

EFFECTIVE DATE: [30 days following publication in the Federal Register].

ADDRESSES: Copies of NUREG-0575, NUREG-1092, and NUREG-1140 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also

available from the National Technical Information Service, 5282 Port Royal Road, Springfield, VA 22161. A copy of each NUREG is also available for public inspection and/or copying at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Keith G. Steyer or C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301)443-7739 or 443-7917, respectively.

SUPPLEMENTARY INFORMATION:

On May 27, 1986, following Commission approval, the proposed revision to 10 CFR Part 72 relating to MRS licensing was published in the Federal Register (51 FR 19106) for comment. The comment period expired on August 25, 1986.

The NRC received 195 comment letters from utilities, engineering companies, State offices, environmental groups, private citizens, and a member of the U.S. House of Representatives. The comment letters from private citizens numbered about 145. (Some of these were signed by several individuals or were submitted on behalf of private business firms.) From the comment letters received, the staff identified 27 separate topics to which specific responses were directed. Comments were also received which addressed the original rule, not the proposed amendment. In response to the comments, several changes have been made to the proposed rule. The majority of these changes are mainly clarifying in nature.

A compilation of the issues raised as a result of public comment and the accompanying Commission response follow:

1. Backfitting

Comment:

Several commenters indicated that the proposed rule should incorporate the sense of the reactor backfitting rule set out in 10 CFR 50.109.

Response:

Although these storage facilities are not like reactors but are, for the most part, static by nature with very little need for design changes, the staff has revised the backfitting requirements of 10 CFR 72.42. The change is being made to conform § 72.42 more closely to § 50.109 as modified by the court decision in Union of Concerned Scientists, et al. v. U.S. Nuclear Regulatory Commission, et al. Nos. 85-1757 and 86-1219 (U.S.C.A.D.C. August 4, 1987).

2. Opportunity for Hearing Prior to the First Receipt of Spent Fuel or High-Level Radioactive Waste (HLW).

Comment:

A new proposed §72.34(c) was added to 10 CFR Part 72 specifically providing that the Commission may, upon its own initiative, issue a notice of opportunity for hearing prior to the first receipt of spent fuel or high-level radioactive waste at an MRS if it finds this to be in the public interest. In the supplementary

information in the May 27, 1986 Proposed Rule the Commission indicated its own considerations on this topic and expressed particular interest in receiving public comment on (1) the need to make a finding before MRS operation that construction conforms to the license application, (2) provisions for second stage hearing rights to address specific new issues which could not have been litigated at the first stage and/or new information which has been revealed since issuance of the license, and (3) the format of the hearing, if held. Of the comment letters that addressed these points, some expressed no preference, some favored the provisions, some thought the provisions were unnecessary.

The principal reasons given by proponents of these provisions are that the public will have more confidence that the MRS will be operated safely and that there should be a clear opportunity to examine new issues which could be raised. Other comments of proponents were that the Department of Energy has had poor public performance in the past, that the degree of hazard is similar to nuclear power reactors which require a two-stage process, and that the opportunity for a second hearing could be an appropriate time to examine technical/financial information. Additional comments suggested that the rule require a second mandatory hearing and that funding be provided for nonprofit groups to participate in a second hearing.

On the topic of a finding it was suggested that (1) criteria be set forth for any finding the Commission may make, and (2) the NRC inspections should certify quality assurance and completeness of construction in an inspection report prior to initiation of operation. One comment suggested that start-up of the MRS should be linked to the repository authorization as an issue at a second hearing.

The principal reasons given by those opposed to the new provisions for a second hearing were that (1) it would cause unnecessary delay, (2) the Commission's regulations in 10 CFR Part 2 were sufficient to examine any new issues, (3) the NRC's normal systematic inspections are adequate to assure that construction was proper, (4) the nature of the MRS is such that all issues could be covered by the opportunity for public review prior to issuing a license and starting construction, and (5) the backfitting provision (§72.42) provides additional assurance that significant issues may be raised by staff after the license is issued. Other reasons offered in objection to the new provisions were that (6) there was no basic difference between an MRS and an Independent Spent Fuel Storage Installation (ISFSI), (7) the small amount of solidified high-level waste which could be received could not justify any change in procedure from an ISFSI, and (8) the Safety Analysis Report (SAR) update procedure will assure that any new issue will be known and understood by NRC staff.

Response:

The Commission specifically added the new provision and requested comments in order to obtain as complete an understanding as possible of whether or not any benefits would accrue to the public from such a procedure. This was done with full knowledge that the Atomic Energy Act of 1954 as amended only requires one hearing and that under the procedures in 10 CFR Part 2 the opportunity always exists for any member of the public to bring any new issues to the Commission's attention.

In the comments received from the public there was no indication that there were likely to be any new safety issues brought forward which could not have been fully addressed on the occasion of the hearing held prior to issuance of the license. The licensing process of Part 72 supports one stage licensing as it requires that all information needed for the licensing action be available and complete before a license is issued, i.e., final design, quality assurance/control procedures, operator training procedures, operating technical specifications, etc. Unlike a reactor license where a construction permit is issued prior to final design, an MRS application for license contains a final and complete design and therefore one stage licensing is achievable. As to conformance of construction with the application and license, the Commission believes that, unlike reactors, construction of Part 72 type facilities will be simple and straight-forward. Accordingly, in the Commission's judgment, there will be no need, as part of the safety review prior

to license issuance, to require an applicant to "prove" conformance of the as-built facility with the application. NRC would audit construction progress and, in the event some problems were found, enforcement action could be taken to correct them and, if necessary, halt the receipt of spent fuel until they were corrected. In this regard, § 72.56(c)(3) provides for establishing an NRC resident inspection program if warranted.

3. Interaction with States

Comment:

Comments were received concerning providing of information to State and local governments and their interaction in the licensing process with DOE and the Commission.

Response:

Under § 72.310 of the proposed rule, the Governor and legislature of any State in which a monitored retrievable storage installation may be located and the governing body of any affected Indian tribe will be provided timely and complete information regarding determinations or plans made by the Commission with respect to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility. In response to the comment, the Commission will change § 72.310 "Provision of MRS Information" to require that the above information will also be provided to the

chief executive of the local municipality and to the Governors of any contiguous States.

Participation by persons, including States, in license reviews is as provided for in 10 CFR Part 2, Subpart G. In addition, at the request of the MRS host State, the Commission will enter into discussions under Section 274i of the Atomic Energy Act, as amended, with the host State for the purpose of negotiating an agreement to perform inspections or other functions on a cooperative basis as the Commission deems appropriate.

4. High Burn-Up Fuel

Comment:

In response to a 1980 petition for rulemaking, the Commission agreed (51 FR 23233, June 26, 1986) to prepare an environmental assessment on high burn-up fuel. The Commission's response concerning impacts of high burn-up fuel should be provided.

Response:

The matter of high burn-up fuel is being addressed in a separate action; issuance by the NRC of an environmental assessment addressing this subject is expected in late 1987. Therefore, the Commission will not address the issue at this time, but will take action as appropriate when the environmental assessment is completed.

5. Emergency Planning

Comment:

As discussed in supplementary information to the proposed revisions to 10 CFR Part 72 the rule was rewritten to set forth explicit requirements appropriate to an ISFSI or an MRS, rather than refer to Appendix E to 10 CFR Part 50, which is specific to nuclear power reactors. Responders commented on this change. Several thought that there should be a wider dissemination of the emergency plan which an applicant would have to prepare pursuant to the rewritten § 72.19, as well as a comment period longer than the specific 60 days. Another responder thought that 60 days was adequate. Other comments were that (1) sabotage of casks and terrorism, sabotage and military attack scenarios should be considered in an emergency plan, (2) a fully developed and tested offsite emergency plan should be developed, (3) the new version of § 72.19 implies a need for offsite protective actions which is incorrect, (4) the supplementary information which will accompany the issuance of the final rule should discuss worldwide experience and previous reviews and studies as support for the new emergency planning provisions, and (5) the emergency plan should continue to be the same as that for nuclear power reactors.

Response:

The basic concept of emergency planning in § 72.19 has not been changed. None of the respondents provided any additional information to the staff or questioned the staff analyses such

as to change the basis for the staff's approach to emergency planning for an ISFSI or an MRS. Moreover, in view of the relatively passive nature of facilities for the receipt, handling and storage of spent fuel and high-level radioactive waste, as compared to operating power reactors, emergency plans for ISFSI and MRS need not be equivalent to emergency plans for reactors. The text of § 72.19 has been replaced with the appropriate parts of the Commission's proposed amendments to Parts 30, 40 and 70 Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees (52 FR 12921, April 20, 1987) recently published for comment. This format change provides for consistency in regulatory language but does not change the approach which requires onsite emergency planning with provisions for offsite emergency response in terms of coordination and communication with offsite authorities and the public.

Sabotage, terrorism, and military attacks are not treated as emergency preparedness issues. The Commission's established practice with respect to dangers of enemy action is that the protection of the United States against hostile enemy acts is a responsibility of the nation's defense establishment and the various agencies having internal security functions. Acts other than military are covered under a planning system included in Subpart H of Part 72, which contains requirements respecting physical security and safeguards contingency plans that are specifically designed to preclude the occurrence of such acts.

The primary purpose of an emergency response plan is to prescribe measures to be taken to mitigate the effects of accidental releases of radioactivity, irrespective of their cause. Thus, in the unlikely event that there should be an accidental release of radioactivity by reason of an act of terrorism or an act of sabotage, protective actions would be taken as prescribed in the emergency response plan, just as they would be taken in the case of accidental release arriving from other causes.

6. Department of Energy as Licensee for the MRS

Comment:

Respondents commented on several aspects of the licensing of the Department of Energy for the MRS. One comment requested that in every instance in which there would be a difference in requirement between the Department and other licensees, that that difference should be specifically defined in Part 72. Other commenters pointed out that the funding for the MRS was from the Nuclear Waste Fund as stipulated in the NWSA and, therefore, the Department should be required, through Part 72, to show how these funds will be adequate for operation and decommissioning. A further comment questioned the Department's authority pursuant both to Part 72 and its own orders to delegate quality assurance program responsibilities to its contractor(s). One commenter suggested that Part 72 should permit revocation or suspension of the Department's license for the MRS since the NRC could not impose civil penalties for license violations.

Response:

As discussed in the supplementary information to the proposed revisions to Part 72, the Department of Energy is exempted from certain financial reports, creditor information and financial plans for decommissioning. As pointed out in the comment above, funding for the MRS will be from the Nuclear Waste Fund, separately accountable from public funds. Consistent with the principle of full cost recovery in Section 302 of the NWPA (42 U.S.C. 10222) this fund will provide all financial resources for the MRS i.e., licensing, construction, operation and decommissioning. Since DOE is a federal agency and the status of the NWPA waste fund is reported to and reviewed by the Congress yearly, the Commission believes that Congress will assure that adequate funds are available and appropriated for DOE to carry out its statutory responsibility. Under these circumstances additional NRC oversight is unnecessary and inappropriate.

As to possible conflicts in the licensing and regulatory process between orders and procedures of the Department of Energy and NRC requirements, two government agencies, the commenter provided no specifics and the Commission is not aware of any such conflict. The Department will be provided the same latitude as any other licensee pursuant to § 72.101 wherein it is stated that "the licensee may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program."

No exemptions from the provisions of §72.41, "Modification, revocation, and suspension of licenses", and §72.57, "Violation" are shown for the Department. Therefore, the Commission could impose penalties on the Department if there were sufficient justification. The Commission knows of no other differences between the Department and other licensees for which a change in Part 72 is warranted. (The commenters recommended no specific changes in this area.)

7. Minimum Decay Period (Age) for Receipt of Spent Fuel

Comment:

It was noted that there is a seeming discrepancy between the minimum decay period (age) of spent fuel as specified in §72.2 (one year) and a reference to the environmental analysis in NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" (five-year decay assumed).

Response:

The minimum one year decay period in §72.2 is based on assuring the decay of radioisotopes having half-lives on the order of a few days or less. In actuality, the decay periods are likely to be much longer than one year. Accordingly, the NUREG-1140 analyses were based on the more realistic, but still conservative, assumption that five or more years of decay would have taken place for the spent fuel for which an accident in a dry cask was assumed. This is not a discrepancy since different

purposes are being served in each instance. In choosing a nominal decay period of 10 years and a five-year minimum decay period in the design parameters for the MRS the Department of Energy (DOE) is merely exercising its own prerogative to use a longer decay criterion for purposes of fuel receipt. Selection of a five-year minimum decay period also reflects DOE's understanding that the spent fuel to be received at the MRS will already have decayed for periods of time likely to be even much greater than five years at individual power reactor sites. The original analysis for Part 72 was based on one year-decay.

8. Physical Security Plan

Comment:

A few commenters were concerned about the proposed change in the requirements of the physical security plan for the Department of Energy in that the Department must provide a certification that it will provide at the MRS "such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security." The concerns were that this was an added requirement imposed only on the Department and that there was no definition of what a "comparable" DOE facility would consist of.

Response:

For all licensees physical security plans are designed for two purposes: 1) to protect against sabotage and 2) to promote the common defense and security. The change in the requirements of

the physical security plan is intended to be consistent with 10 CFR Part 60, "Disposal of High-Level Radioactive Wastes in Geologic Repositories," wherein it is recognized that the Department already carries these responsibilities for all of its facilities.

The Department in carrying out its responsibility to promote the common defense and security of all its facilities can best identify the surface DOE facilities to which the MRS is most comparable for purposes of physical security without the unnecessary burden of an NRC definition of "Comparable."

Comparability in this context is a function of the kinds and quantities of nuclear materials held at the facilities and the potential consequences of theft or sabotage. However, the NRC staff believes that the Receiving Basin for Off-Site Fuel at the Savannah River Plant may be an appropriately comparable facility.

9. Continuous Cask Monitoring Provision

Comment:

Several commenters pointed out that the wording of the provision in § 72.92(h)(4) for monitoring of storage confinement systems was inconsistent with Section 141(b)(1)(B) of the NWPA wherein it is required that an MRS facility shall be designed to permit continuous monitoring. Another commenter suggested that the State should participate in the monitoring.

Response:

The difference in wording between Section 141(b)(1)(B) of the NWPA and § 72.92(h)(4) was inadvertent. The staff has corrected the wording of § 72.92(h)(4) in the final rule to agree with the NWPA. As to State participation in monitoring, this is a matter to be resolved with the Department or as indicated in Response Number 3.

10. Inspection and/or Monitoring**Comment:**

In §72.33(c)(3) the words "inspection and monitoring" have been changed to "inspection or monitoring."

Response:

The proposed change serves no useful purpose. The degree and method of inspection and monitoring will be dependent upon design and operational limits for specific cases. The words "inspection and monitoring" will be reinstated.

11. Foreign Fuel**Comment:**

One commenter expressed objection to the processing and storage of foreign spent fuel or HLW at the MRS and stated that it should be specifically prohibited.

Response:

The reference to foreign fuel in § 72.54 of the proposed rule was limited to material transfer report requirements and was not intended either to restrict or to permit such processing or storage. Section 302(a) of the NWPA does specify only "high-level radioactive waste, or spent nuclear fuel of domestic origin" and therefore the reference to foreign fuel at an MRS will be removed.

12. Tornado Missile

Comment:

Commenters have disagreed with the deletion of the exemption regarding protection against tornado missile impact, that is, as expressed in the existing rule, "...An ISFSI need not be protected from tornado missiles...". Another commenter who favors the deletion concerning protection from tornado missiles would also have the restriction limiting its scope to "...structures, systems, and components important to safety" deleted.

Response:

The explanation of the exemption for tornado missiles, set out in the preamble of the existing rule (45 FR 74693, November 12, 1980) states that radionuclide releases from spent fuel which has undergone at least a year of radioactive decay would not be significant in the event of tornado missile impact, citing an accident evaluation from NUREG-0575 "Generic Environmental

Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuels" with gaseous radionuclide releases from water pool storage. With the continuing development of dry storage technologies, which include metal casks, concrete silos, dry wells, and air-cooled vaults, the Commission decided the designs should take into account tornado missile protection, unless it is shown that tornado missiles will not have any effect on structures, systems and components important to safety. While offsite gaseous release impacts, from fuel rod rupture, due to a tornado missile incident would remain insignificant, it is important to assure that design criteria for dry storage designs continue to address maintaining confinement of particulate material. All safety reviews for storage licensed under Part 72, both water pool and dry storage, have evaluated designs with respect to tornado missile impact. Since safety considerations drive our concern with respect to the tornado missile phenomenon, it is not necessary to expand that concern beyond "structures, systems, and components important to safety."

13. Use of Part 50 Criteria

Comment:

To expedite the licensing process for facilities proposed on sites which currently possess a 10 CFR Part 50 license, it was proposed that the applicable siting evaluation factors and general design criteria which have been reviewed and approved by the NRC for the Part 50 license be directly adopted for the Part 72 facility without additional review, hearings or

approvals. Adequate reviews and approvals have been completed, and any change to those previously approved should be treated as a backfit.

Response:

The storage of an increased amount of spent fuel on a reactor site, over that covered under an existing Part 50 license, requires staff action through safety and environmental reviews. In taking this action to authorize additional storage capacity for spent fuel the staff will apply criteria from Part 50 or Part 72, depending on the type of licensing action being sought. Licensing action for an ISFSI would use criteria contained in Part 72 and Part 50 would be used for amending an existing reactor license. Storage of spent fuel on a reactor site outside of an existing reactor basin is already regulated under the criteria of Part 72 and these criteria have been used in reviewing applications for additional fuel storage at reactor sites.

14. Cladding

Comment:

Opposition is expressed to any lowering of fuel cladding protection, as provided for in the existing § 72.72(h)(1).

Response:

The revision of this provision (i.e., § 72.92(h)(1)) addressed confinement of fuel material, which is the purpose of protecting the fuel cladding. The revised provision specifically provides

for additional alternative means of accomplishing this objective. This serves to enhance confinement protection capability rather than diminish it.

15. Rod Consolidation

Comment:

Comments were received concerning the Department of Energy's plan to consolidate rods from spent fuel assemblies into sealed packages. One commenter suggested inserting the word "chemically" after the word "separated" in the definition of spent nuclear fuel. Another comment suggested that a separate environmental impact statement be prepared on rod consolidation. It was suggested that the NRC give rod consolidation special consideration and that it is not clear at present what requirements the NRC will use for rod consolidation.

Response:

Rod consolidation is the most elaborate operation contemplated for the MRS. The Department of Energy in its proposal and elsewhere has indicated its intention to fully develop the rod consolidation process for installation and operation. The rod consolidation system must meet all applicable portions of the general design criteria. There is no precedent for the preparation of an environmental impact statement in connection with a single system of a facility for which a complete environmental impact statement will be prepared. The aspect of rod consolidation will be covered in that statement, as well as in the safety

review and evaluation by the staff in connection with the application for an MRS. The NRC does expect to be kept informed by the Department of its developmental activities prior to receipt of an application.

The insertion of the word "chemically" as suggested has been accepted by the staff for the final rule.

16. Accident Analysis For Two Barriers

Comment:

A comment was received regarding engineered barriers such as canisters, "...the design basis accident scenario (i.e., release of gap activity from all fuel contained in a dry cask) should be revised to account for cases in which canister or other engineered barriers are incorporated."

Response:

Most cask designs do not incorporate canistering of spent fuel assemblies. Therefore, for purposes of this rulemaking, choice of a lesser accident scenario assuming canistering is not appropriate for a bounding analysis. In a safety review involving a specific design, which incorporates an additional engineered barrier, the design basis accident scenario should, of course, consider this addition in the review analysis.

17. Records

Comment:

Comments were received concerning archiving of records; by whom and how long?

Response:

The proposed rule is consistent with current NRC policy concerning retention periods for records. The specific details of their physical storage is action taken at time of licensing.

18. Operator Safety

Comment:

Comments were received concerning design for ALARA.

Response:

The licensee is responsible for meeting the requirements of 10 CFR Part 20 "Standards for Protection Against Radiation," and all its provisions for maintaining ALARA. In addition § 72.15 Contents of Application: Technical Information requires applicants for a license to supply information for maintaining ALARA for occupational exposure.

19. MRS collocation with Waste Repository

Comment:

Commenter suggested expanding limitation for collocation with repository to include other facilities.

Response:

The collocation restrictions in § 72.75 are specifically included in order to comply with Section 141(g) of the NWPA (42 U.S.C. 10161(g).) (See also Section 135(a)(2).)

20. MRS collocation with other nuclear facilities

Comment:

Commenter was concerned about other nuclear facilities that are not licensed.

Response:

The licensing process considers all activities and facilities, licensed or unlicensed, that could increase the probability or consequences of safety significant events at licensed facilities.

21. High Level Liquid Waste

Comment:

Several commenters were concerned about the storage of liquid High-Level Waste (HLW).

Response:

The MRS will be designed and licensed for the storage of irradiated fuel and solidified waste from the processing of fuel.

The MRS will not receive liquid HLW and the form of the solid waste stored will be that which is compatible with the requirements for permanent disposal in a repository.

Any liquid wastes generated at the MRS will be handled in accordance with existing regulations.

22. Quality Assurance - Quality Control

Comment:

Comments were associated with the apparent difference between the quality assurance criteria proposed and the previous quality assurance criteria.

Response:

The proposed rule quality assurance subpart was written to incorporate the previously referenced 10 CFR Part 50 Appendix B quality assurance criteria specifically into Part 72. There was no intent to change the criteria. Minor conforming changes have been made in the final rule.

23. Criticality

Comment:

A comment was received concerning the removal of the requirement for verifying continued efficacy of solid neutron poisons.

Response:

Several changes have been made to the criticality section of the final rule to make it correspond to other Parts of the Commission's regulations and standard criticality review practices. Verification of solid neutron poisons has been retained. Double contingency criteria and requirements for

criticality monitors have been added. It is not the intent of the revision concerning criticality monitors to require monitors in the open areas where loaded casks are positioned for storage as that system is static. Monitors are required where the systems are dynamic.

24. MRS Storage Capacity

Comment:

Commenters questioned the MRS storage capacity as stated in the proposed rule in §§ 72.1 and 72.75.

Response:

In the proposed rule MRS storage capacity values are based on the NWPA, as approved by Congress. (See Section 135 (a)(1)(A), 42 U.S.C. 10155(a)(1)(A) and Section 114(d), 42 U.S.C. 10134(d).)

25. The Term - "Temporary Storage"

Comment:

Comments objected to the removal of the term "Temporary Storage" from § 72.3 Definitions and the removal of the word "temporary" from § 72.2 Scope.

Response:

In making these changes, the Commission does not intend to change the scope of Part 72 which relates to the licensing of ISFSI and MRS for the purpose of storage only. Part 72 does not nor

is it intended to cover permanent disposal. Accordingly, use of the word "temporary" in the rule is non-definitive and unnecessary.

26. MRS Rule Making

Comment:

Many commenters (approximately 150), through the use of form letters or paraphrasing, did not want the MRS in Tennessee, did not support any form of rulemaking until Congress had authorized the MRS through funding appropriation, and made reference to "license it twice."

Response:

The Commission's regulations are silent on location of an MRS or authorization for MRS construction as a result of Congressional action. The regulations are promulgated to permit the Commission to carry out its mandate of providing for the health and safety of the public if an MRS is built. The "license it twice" concept is addressed in Response Number 2.

27. Increase of Licensing Period for the MRS

Comment:

Comments questioned the Commission's basis, as described in the statement of considerations for the proposed changes to Part 72, for providing a longer license term for an MRS (40 years) than for an ISFSI (20 years). Comments also included (1) the term should start with the receipt of spent fuel, and (2) ISFSI

should also have a 40-year license term. Further explanation of the basis for the license term was also requested. All of the commenters seemed to concentrate on a license for the spent fuel rather than a license covering a facility for storage.

Response:

An MRS as described in the NWPA is intended for storage, but not necessarily for the same fuel since fuel will continually be moved in and out over the life of the facility in concert with operation of a repository. A longer license term is therefore appropriate for an MRS considering the purpose and mode of operation of the facility.

In contrast to the MRS, the spent fuel stored in an ISFSI at reactor sites or elsewhere will be collected until the Department of Energy waste disposal system is ready for its receipt; the current schedule indicates that this transfer from reactor sites to an MRS could begin to occur within about 10 years. The Commission has in place a license renewal process for ISFSI storage which provides an opportunity for extension of the 20-year license term, with staff reevaluation of safety and environmental aspects of the operation. In any event the systematic inspection program of the Commission wherein the licensee's adherence to all license conditions and technical specifications is continually being examined applies to both MRS and ISFSI storage over the entire period of a license. The

Commission will provide a 40-year license term for an MRS in the final rule.

On December 22, 1987, the Nuclear Waste Policy Amendments Act of 1987 (Subtitle A of Title V of the Omnibus Budget Reconciliation Act for Fiscal Year 1988) was approved by the President and became public law. The 1987 amendments authorized the Secretary of the Department of Energy to site, construct and operate one monitored retrievable storage facility subject to certain statutory conditions (sec. 142(b)). As a result of these changes in the statute, it has been necessary to make certain conforming changes in the text of the final rule. Most of the changes are minor in nature. For example, references have been added to the authority section and conforming changes have been made in the following sections of the rule: §§ 72.14(d(5)), 72.31(b), 72.70(e) and 73.75(d)). A new paragraph (g) has been added to § 72.33, License conditions, to incorporate into the Commission's regulations the specific statutory conditions (see sec. 148(d) of the NWPA) which must be included in a Commission license for the monitored retrievable storage installation authorized pursuant to section 142(b) of the NWPA. For an explanation of these conditions, see 133 Cong. Rec. H11973-75 and S18683-84 (daily ed. December 21, 1987).

Having considered all of the above, the Commission has determined that a final rule be promulgated. The text of the final rule has some changes as noted from the proposed rule.

Finding of No Significant Environmental Impact

The Commission has determined not to prepare an environmental impact statement for the proposed amendments to 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

NUREG-0575, "Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel," August 1979, was issued in support of the final rule promulgating 10 CFR Part 72. "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation ISFSI)," which became effective November 28, 1980. On January 7, 1983 the Nuclear Waste Policy Act of 1982 was signed into law. A major provision of this law is that the Department of Energy (DOE) shall complete a detailed study of the need for and feasibility of, and submit to Congress a proposal for, the construction of one or more monitored retrievable storage facilities (MRS) for high-level radioactive waste and spent nuclear fuel. If Congress approves the construction of an MRS, DOE would be required to obtain a license from the Commission for the facility. The NRC staff has concluded that although existing 10 CFR Part 72 is generally applicable to the design, construction, operation, and decommissioning of MRS, additions are necessary to explicitly cover the licensing of spent nuclear fuel and high-level radioactive waste storage in an MRS. In August 1984, the NRC published an environmental assessment for this proposed revision of Part 72, NUREG-1092, "Environmental Assessment for 10 CFR Part 72, Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste." NUREG-1092 discusses the major issues of the rule and the potential

impact on the environment. The findings of the environmental assessment are "(1) past experience with water pool storage of spent fuel establishes the technology for long-term storage of spent fuel without affecting the health and safety of the public, (2) the proposed rulemaking to include the criteria of 10 CFR Part 72 for storing spent nuclear fuel and high-level radioactive waste does not significantly affect the environment, (3) solid high-level waste is comparable to spent fuel in its heat generation and in its radioactive material content on a per metric ton basis, and (4) knowledge of material degradation mechanisms under dry storage conditions and the ability to institute repairs in a reasonable manner without endangering the health [and safety] of the public shows dry storage technology options do not significantly impact the environment." The assessment concludes that, among other things, there are no significant environmental impacts as a result of promulgation of these revisions of 10 CFR Part 72.

Based on the above assessment the Commission concludes that the rulemaking action will not have a significant incremental environmental impact on the quality of the human environment.

Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget approval number 3150-0132.

Regulatory Analysis

The NRC has prepared a regulatory analysis on this final rule. The analysis examines the benefits and alternatives considered by the NRC. The analysis is available for inspection in the NRC Public Document Room, 1717 H Street NW., Washington, DC. Single copies of the analysis may be obtained from C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-7663).

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, (5 U.S.C 605(b)), the Commission certifies that this rule will not have a significant economic impact on a substantial number of small entities. This final rule affects only the licensing and operation of independent spent fuel storage installations and of monitored retrievable storage installations. The owners of these installations, nuclear power plant utilities or DOE, do not fall within the scope of the definition of "small entities" set forth in section 601(3) of the Regulatory Flexibility Act or within the definition of "small business" in section 3 of the Small Business Act, 15 U.S.C. 632, or within the Small Business Size Standards set out in regulations issued by the Small Business Administration at 13 CFR Part 121.

List of Subjects in 10 CFR Parts 2, 19, 20, 21, 51,

70, 72, 73, 75, and 150

Part 2 - Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalty, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

Part 19 - Environmental protection, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Penalty, Radiation protection, Reporting and recordkeeping requirements, Sex discrimination.

Part 21 - Nuclear power plants and reactors, Penalty, Radiation protection, Reporting and recordkeeping requirements.

Part 51 - Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

Part 70 - Hazardous materials - transportation, Nuclear materials, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

Part 72 - Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

Part 73 - Hazardous materials - transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 75 - Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 150 - Hazardous materials - transportation, Intergovernmental relations, Nuclear materials, Penalty, Reporting and recordkeeping requirements, Security measures, Source material, Special nuclear material.

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, 5 U.S.C. 552 and 553, and the Nuclear Waste Policy Act of 1982, the NRC is adopting the following revision to 10 CFR Part 72 and related conforming amendments to 10 CFR Parts 2, 19, 20, 21, 51, 70, 73, 75, and 150.

1. 10 CFR Part 72 is revised to read as follows:

PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT
STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Subpart A--General Provisions

Sec.

- 72.1 Purpose.
- 72.2 Scope.
- 72.3 Definitions.
- 72.4 Communications.
- 72.5 Interpretations.
- 72.6 License required; types of licenses.
- 72.7 Specific exemptions.
- 72.8 Denial of licensing by Agreement States.
- 72.9 Information collection requirements: OMB approval.
- 72.10 Employee protection.

Subpart B--License Application, Form, and Contents

- 72.11 Filing of application for specific license.
- 72.12 Elimination of repetition.
- 72.13 Public inspection of application.

- 72.14 Contents of application: General and financial information.
- 72.15 Contents of application: Technical information.
- 72.16 Contents of application: Technical specifications.
- 72.17 Contents of application: Applicant's technical qualifications.
- 72.18 Decommissioning plan, including financing and recordkeeping.
- 72.19 Emergency plan.
- 72.20 Environmental report.
- 72.21 (Reserved)

Subpart C--Issuance and Conditions of License

- 72.31 Issuance of license.
- 72.32 Duration of license; renewal.
- 72.33 License conditions.
- 72.34 Public hearings.
- 72.35 Changes, tests, and experiments.
- 72.36 Transfer of license.
- 72.37 Creditor regulations.
- 72.38 Application for termination of license.
- 72.39 Application for amendment of license.
- 72.40 Issuance of amendment.
- 72.41 Modification, revocation, and suspension of license.
- 72.42 Backfitting.

Subpart D--Records, Reports, Inspections and Enforcement

- 72.50 Safety analysis report updating.
- 72.51 Material balance, inventory, and records requirements for stored materials.

- 72.52 Reports of accidental criticality or loss of special nuclear material.
- 72.53 Material status reports.
- 72.54 Nuclear material transfer reports.
- 72.55 Other records and reports.
- 72.56 Inspections and tests.
- 72.57 Violations.

Subpart E--Siting Evaluation Factors

- 72.70 General considerations.
- 72.71 Design basis external natural events.
- 72.73 Design basis external man-induced events.
- 72.75 Siting limitations.
- 72.77 Identifying regions around an ISFSI or MRS site.
- 72.79 Defining potential effects of the ISFSI or MRS on the region.
- 72.81 Geological and seismological characteristics.
- 72.83 Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS.
- 72.85 Controlled area of an ISFSI or MRS.
- 72.87 (Reserved)
- 72.89 Spent fuel or high-level radioactive waste transportation.

Subpart F--General Design Criteria

- 72.91 General considerations.
- 72.92 Overall requirements.
- 72.93 Criteria for nuclear criticality safety.
- 72.94 Criteria for radiological protection.

- 72.95 Criteria for spent fuel, high-level radioactive waste, and other radioactive waste storage and handling.
- 72.96 Criteria for decommissioning.

Subpart G--Quality Assurance

- 72.100 Quality assurance requirements.
- 72.101 Quality assurance organization.
- 72.103 Quality assurance program.
- 72.105 Design control.
- 72.107 Procurement document control.
- 72.109 Instructions, procedures, and drawings.
- 72.111 Document control.
- 72.113 Control of purchased material, equipment, and services.
- 72.115 Identification and control of materials, parts, and components.
- 72.117 Control of special processes.
- 72.119 Licensee inspection.
- 72.121 Test control.
- 72.123 Control of measuring and test equipment.
- 72.125 Handling, storage, and shipping control.
- 72.127 Inspection, test and operating status.
- 72.129 Nonconforming materials, parts, or components.
- 72.131 Corrective action.
- 72.133 Quality assurance records.
- 72.135 Audits.

Subpart H--Physical Protection

- 72.201 Physical security plan.
- 72.202 Design for physical protection.
- 72.203 Safeguards contingency plan.
- 72.204 Changes to physical security and safeguards contingency plans.

Subpart I--Training and Certification of Personnel

- 72.301 Operator requirements.
- 72.302 Operator training and certification program.
- 72.303 Physical requirements.

Subpart J--Provision of MRS Information to State

Governments and Indian Tribes

- 72.310 Provision of MRS information.
- 72.312 Participation in license reviews.
- 72.314 Notice to States.
- 72.316 Representation.

Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C.

4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100-203, __ Stat. ____ (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, ____).

Section 72.33(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100-203, __ Stat. ____ . Section 72.34 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134 Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.75(d) also issued under sec. 145(g), Pub. L. 100-203, __ Stat. ____ . Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2244 (42 U.S.C. 10101, 10137(a), 10161(h)).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 72.6, 72.14, 72.15, 72.16, 72.17(d), 72.18, 72.19, 72.33(a), (b)(1), (4), (5), (c), (d)(1), (2), (e), (f), 72.35(a), 72.36(a), 72.37(b), 72.51(b), (c), 72.52(a), (b), 72.53, 72.54, 72.83, 72.85, 72.91, 72.92, 72.93, 72.94, 72.95, 72.96, 72.100(b), (c), 72.107, 72.113, 72.115, 72.119, 72.125, 72.127, 72.129, 72.131, 72.135, 72.201, 72.203, 72.204 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 72.10(a), (e), 72.14, 72.15, 72.16, 72.17, 72.18, 72.19, 72.33(a),(b)(1), (4), (5), (c), (d)(1),(2),(e), (f), 72.35(a), 72.36(a), 72.37(b), 72.70(a)-(d), (f), 72.71, 72.73, 72.77, 72.79, 72.81(c), (d), (f), 72.83, 72.85, 72.91, 72.92, 72.93, 72.94, 72.95, 72.96, 72.100(b), (c), 72.101, 72.103, 72.105, 72.107, 72.109, 72.111, 72.113, 72.115, 72.117, 72.119, 72.121, 72.123, 72.125, 72.127, 72.129, 72.131, 72.135, 72.201, 72.202, 72.203, 72.204, 72.301, 72.302, 72.303 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 72.10(e), 72.11, 72.14, 72.15, 72.16, 72.17, 72.18, 72.19, 72.33(b)(3), (c)(5), (d)(3), (e), (f), 72.35(b), (c), 72.36(b), 72.38(a), (b), (c), 72.39,

72.50, 72.51, 72.52(a), (b), 72.53(a), 72.54(a), 72.55, 72.56, 72.71(b), 72.73(b), 72.100(b), (c), (d), 72.103(a), 72.105, 72.107, 72.109, 72.111, 72.113(a), (b), 72.115, 72.119, 72.121, 72.127, 72.129, 72.131, 72.133, 72.135, 72.201, 72.203, 72.204, 72.302 are issued under sec. 1610, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

Subpart A--General Provisions

§ 72.1 Purpose.

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to receive, transfer, and possess power reactor spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) and the terms and conditions under which the Commission will issue such licenses, including licenses to the U.S. Department of Energy (DOE) for the provision of not more than 1900 metric tons of spent fuel storage capacity at facilities not owned by the Federal Government on January 7, 1983 for the Federal interim storage program under Subtitle B - Interim Storage Program of the Nuclear Waste Policy Act of 1982 (NWPA). The regulations in this part also establish requirements, procedures, and criteria for the issuance of licenses to DOE to receive, transfer, package, and possess power reactor spent fuel, high-level radioactive waste, and other radioactive materials associated with the spent fuel and high-level radioactive waste storage, in a monitored retrievable storage installation (MRS) if authorized by Congress pursuant to section 141 of the Nuclear Waste Policy Act of 1982.

§ 72.2 Scope.

(a) Except as provided in § 72.6(b), licenses issued under this part are limited to the receipt, transfer, packaging, and possession of (1) power reactor spent fuel to be stored in a complex that is designed and constructed specifically for storage of power reactor spent fuel aged for at least one year, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI); or (2) power reactor spent fuel to be stored in a monitored retrievable storage installation (MRS) owned by DOE that is designed and constructed specifically for the storage of spent fuel aged for at least one year, high-level radioactive waste that is in a solid form, and other radioactive materials associated with spent fuel or high-level radioactive waste storage. The term "Monitored Retrievable Storage Installation" or "MRS", as defined § 72.3, is derived from the NWPA and includes any installation that meets this definition.

(b) The regulations in this part pertaining to an independent spent fuel storage installation (ISFSI) apply to all persons in the United States, including persons in Agreement States. The regulations in this part pertaining to a monitored retrievable storage installation (MRS) apply only to DOE.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of (1) spent fuel in an independent spent fuel storage installation (ISFSI) and (2) spent fuel and solid high-level radioactive waste in a monitored retrievable storage installation (MRS).

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage installation shall be issued in accordance with the requirements of this part as stated in § 72.31, as applicable.

(e) As provided in section 135 of the Nuclear Waste Policy Act of 1982, Pub. L. 97-425, 96 Stat. 2201 at 2232 (42 U.S.C. 10155) the U.S. Department of Energy is not required to obtain a license under the regulations in this part to use available capacity at one or more facilities owned by the Federal Government on January 7, 1983, including the modification and expansion of any such facilities, for the storage of spent nuclear fuel from civilian nuclear power reactors.

§ 72.3 Definitions.

As used in this part:

"Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

"Affected Indian tribe" means any Indian tribe--(1) within whose reservation boundaries a monitored retrievable storage facility is proposed to be located; (2) whose federally defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by the locating of such a facility: Provided, That the Secretary of the Interior finds, upon the petition of the appropriate governmental officials of the tribe, that such effects are both substantial and adverse to the tribe.

"As low as is reasonably achievable" (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to (1) benefits to the public health and safety, (2) other societal and socioeconomic considerations, and (3) the utilization of atomic energy in the public interest.

"Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

"Byproduct material" means 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.

"Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement or manufacture of components of the installation;

or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of paragraphs (1) and (2) of this definition.

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"Confinement systems" means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

"Controlled area" means that area immediately surrounding an ISFSI or MRS for which the licensee exercises authority over its use and within which ISFSI or MRS operations are performed.

"Decommission" means to remove (as a facility) safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license.

"Design bases" means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include: (1) estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved and (2) estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region taking into account the site characteristics and the risks associated with the event.

"Design capacity" means the quantity of spent fuel or high-level radioactive waste, the maximum burnup of the spent fuel in MWD/MTU, the curie content of the waste, and the total heat generation in BTU per hour that the storage installation is designed to accommodate.

"DOE" means the U.S. Department of Energy or its duly authorized representatives.

"Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands.

Areas subject to a one percent or greater chance of flooding in any given year are included.

"High-level radioactive waste" or "HLW" means (1) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (2) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.

"Historical data" means a compilation of the available published and unpublished information concerning a particular type of event.

"Independent spent fuel storage installation" or "ISFSI" means a complex designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage. An ISFSI which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with such other facility and still be considered independent: Provided, that such sharing of utilities and services or physical connections does not: (1) Increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or (2) reduce the margin of safety as defined in the basis for any technical specification of either facility.

"Indian Tribe" means an Indian tribe as defined in the Indian Self Determination and Education Assistance Act (Public Law 93-638).

"Monitored Retrievable Storage Installation" or "MRS" means a complex designed, constructed, and operated by DOE for the receipt, transfer, handling, packaging, possession, safeguarding, and storage of

spent nuclear fuel aged for at least one year and solidified high-level radioactive waste resulting from civilian nuclear activities, pending shipment to a HLW repository or other disposal.

"NEPA" means the National Environmental Policy Act of 1969 including any amendments thereto.

"NWPA" means the Nuclear Waste Policy Act of 1982 including any amendments thereto.

"Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Nuclear Regulatory Commission or the Department of Energy (DOE), except that the DOE 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, as amended (88 Stat. 1244), and Sections 131, 132, 133, 135, 137, and 141 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2229, 2230, 2232, 2241); (2) any State, any political subdivision of a State, or any political entity within a State; (3) any foreign government or nation; or any political subdivision of any such government or nation, or other entity; and (4) any legal successor, representative, agent, or agency of the foregoing.

"Population" means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI or MRS.

"Region" means the geographical area surrounding and including the site, which is large enough to contain all the features related to a phenomenon or to a particular event that could potentially impact the

safe or environmentally sound construction, operation, or decommissioning of an independent spent fuel storage or monitored retrievable storage installation.

"Reservation" means (1) any Indian reservation or dependent Indian community referred to in clause (a) or (b) of section 1151 of title 18, United States Code; or (2) any land selected by an Alaska Native village or regional corporation under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

"Site" means the real property on which the ISFSI or MRS is located.

"Source material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores that contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

"Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material.

"Spent Nuclear Fuel" or "Spent Fuel" means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

"Structures, systems, and components important to safety" mean those features of the ISFSI or MRS whose function is (1) to maintain the conditions required to store spent fuel or high-level radioactive waste safely, (2) to prevent damage to the spent fuel or the high-level radioactive waste container during handling and storage, or (3) to provide reasonable assurance that spent fuel or high-level radioactive waste can be received, handled, packaged, stored, and retrieved without undue risk to the health and safety of the public.

§ 72.4 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be addressed to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Communications, reports, and applications may be delivered in person at the Commission's Offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street NW., Washington, DC.

§ 72.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 72.6 License required; types of licenses.

(a) Licenses for the receipt, handling, storage, and transfer of spent fuel or high-level radioactive waste are of two types: general and specific. Any general license provided in this part is effective without the filing of an application with the Commission or the issuance of a licensing document to a particular person. A specific license is issued to a named person upon application filed pursuant to regulations in this part.

(b) A general license is hereby issued to receive title to and own spent fuel or high-level radioactive waste without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to acquire, deliver, receive, possess, use, or transfer spent fuel or high-level radioactive waste except as authorized in a specific license.

(c) No person may acquire, receive, or possess (1) spent fuel for the purpose of storage in an ISFSI, or (2) spent fuel, high-level radioactive waste, or radioactive material associated with high-level radioactive waste for the purpose of storage in a MRS, except as authorized in a specific license issued by the Commission in accordance with the regulations in this part.

§ 72.7 Specific exemptions.

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

§ 72.8 Denial of licensing by Agreement States.

Agreement States may not issue licenses covering the storage of spent fuel in an ISFSI or the storage of spent fuel and high-level radioactive waste in a MRS.

§ 72.9 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). OMB has approved the information collection requirements contained in this part under control number 3150-0132.

(b) The approved information collection requirements contained in this part appear in §§ 72.11, 72.14 through 72.20, 72.32, 72.33, 72.35 through 72.39, 72.42, 72.50 through 72.56, 72.70, 72.71, 72.73, 72.77, 72.79, 72.81, 72.83, 72.89, 72.91, 72.94, 72.100 through 72.135, 72.201 through 72.204, and 72.302.

§ 72.10 Employee protection.

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, and privileges of employment. The protected activities are established in section 210 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act.

(1) The protected activities include but are not limited to--

(i) Providing the Commission information about possible violations of requirements imposed under either of the above statutes;

(ii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements; or

(iii) Testifying in any Commission proceeding.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in the protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 30 days after an alleged violation occurs by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant, may be grounds for--

(1) Denial, revocation, or suspension of the license.

- (2) Imposition of a civil penalty on the licensee or applicant.
- (3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e) (1) Each licensee and each applicant shall post Form NRC-3, "Notice to Employees," on its premises. Posting must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of Form NRC-3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix D, Part 20 of this chapter or the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Subpart B--License Application, Form, and Contents

§ 72.11 Filing of application for specific license.

(a) Place of filing. Each application for a license, or amendment thereof, under this part should be filed with the Director, Office of

Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Applications, communications, reports, and correspondence may also be delivered in person at the Commission's offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street NW., Washington, DC.

(b) Oath or affirmation. Each application for a license or license amendment (including amendments to such applications), except for those filed by DOE, must be executed in an original signed by the applicant or duly authorized officer thereof under oath or affirmation. Each application for a license or license amendment (including amendments to such applications) filed by DOE must be signed by the Secretary of Energy or the Secretary's authorized representative.

(c) Number of copies of application. Each filing of an application for a license or license amendment under this part (including amendments to such applications) must include, in addition to a signed original, 25 copies of each portion of such application, safety analysis report, environmental report, and any amendments. Another 125 copies shall be retained by the applicant for distribution in accordance with instruction from the Director or the Director's designee.

(d) Fees. The application, amendment, and renewal fees applicable to a license covering the storage of spent fuel in an ISFSI are those shown in § 170.31 of this chapter.

(e) Notice of docketing. Upon receipt of an application for a license or license amendment under this part, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee will assign a docket number to the application, notify the applicant of the docket number, instruct the applicant to distribute copies retained by

the applicant in accordance with paragraph (c) of this section, and cause a notice of docketing to be published in the Federal Register. The notice of docketing shall identify the site of the ISFSI or the MRS by locality and State and may include a notice of hearing or a notice of proposed action and opportunity for hearing as provided by § 72.34 of this part. In the case of an application for a license or an amendment to a license for an MRS, the Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee, in accordance with § 72.310 of this part, shall send a copy of the notice of docketing to the Governor and legislature of any State in which an MRS is or may be located, to the Chief Executive of the local municipality, to the Governors of any contiguous States and to the governing body of any affected Indian tribe.

§ 72.12 Elimination of repetition.

In any application under this part, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: Provided, that such references are clear and specific.

§ 72.13 Public inspection of application.

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with provisions of the regulations contained in Part 2 and Part 9 of this chapter.

§ 72.14 Contents of application: General and financial information.

Each application must state:

- (a) Full name of applicant;
- (b) Address of applicant;
- (c) Description of business or occupation of applicant;
- (d) If applicant is:
 - (1) An individual: citizenship and age;
 - (2) A partnership: name, citizenship, and address of each partner and the principal location at which the partnership does business;
 - (3) A corporation or an unincorporated association:
 - (i) The State in which it is incorporated or organized and the principal location at which it does business; and
 - (ii) - The names, addresses, and citizenship of its directors and principal officers;
 - (4) Acting as an agent or representative of another person in filing the application: the identification of the principal and the information required under this paragraph with respect to such principal.
 - (5) The Department of Energy:
 - (i) The identification of the DOE organization responsible for the construction and operation of the ISFSI or MRS, including a description of any delegations of authority and assignments of responsibilities.
 - (ii) For each application for a license for an MRS, the provisions of the public law authorizing the construction and operation of the MRS.
- (e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out,

in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested. The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary funds; or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

- (1) Estimated construction costs;
- (2) Estimated operating costs over the planned life of the ISFSI or MRS complex; and
- (3) Estimated shutdown and decommissioning costs, and the necessary financial arrangements to provide reasonable assurance prior to licensing that shutdown, decontamination, and decommissioning will be carried out after the removal of spent fuel and/or high-level radioactive waste from storage.

§ 72.15 Contents of application: Technical information.

Each application for a license under this part must include a Safety Analysis Report describing the proposed ISFSI or MRS for the receipt, handling, packaging, and storage of spent fuel or high-level radioactive waste, including how the ISFSI or MRS will be operated. The minimum information to be included in this report must consist of the following:

- (a) A description and safety assessment of the site on which the ISFSI or MRS is to be located, with appropriate attention to the design bases for external events. Such assessment must contain an analysis and evaluation of the major structures, systems, and components of the ISFSI

or MRS that bear on the suitability of the site when the ISFSI or MRS is operated at its design capacity. If the proposed ISFSI or MRS is to be located on the site of a nuclear power plant or other licensed facility, the potential interactions between the ISFSI or MRS and such other facility must be evaluated.

(b) A description and discussion of the ISFSI or MRS structures with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(c) The design of the ISFSI or MRS in sufficient detail to support the findings in § 72.31, including:

(1) The design criteria for the ISFSI or MRS pursuant to Subpart F of this part, with identification and justification for any additions to or departures from the general design criteria;

(2) The design bases and the relation of the design bases to the design criteria;

(3) Information relative to materials of construction, general arrangement, dimensions of principal structures, and descriptions of all structures, systems, and components important to safety, in sufficient detail to support a finding that the ISFSI or MRS will satisfy the design bases with an adequate margin for safety; and

(4) Applicable codes and standards.

(d) An analysis and evaluation of the design and performance of structures, systems, and components important to safety, with the objective of assessing the impact on public health and safety resulting from operation of the ISFSI or MRS and including determination of:

(1) The margins of safety during normal operations and expected operational occurrences during the life of the ISFSI or MRS; and

(2) The adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents, including natural and manmade phenomena and events.

(e) The means for controlling and limiting occupational radiation exposures within the limits given in Part 20 of this chapter, and for meeting the objective of maintaining exposures as low as is reasonably achievable.

(f) The features of ISFSI or MRS design and operating modes to reduce to the extent practicable radioactive waste volumes generated at the installation.

(g) An identification and justification for the selection of those subjects that will be probable license conditions and technical specifications. These subjects must cover the design, construction, preoperational testing, operation, and decommissioning of the ISFSI or MRS.

(h) A plan for the conduct of operations, including the planned managerial and administrative controls system, and the applicant's organization, and program for training of personnel pursuant to Subpart I.

(i) If the proposed ISFSI or MRS incorporates structures, systems, or components important to safety whose functional adequacy or reliability have not been demonstrated by prior use for that purpose or cannot be demonstrated by reference to performance data in related applications or to widely accepted engineering principles--an identification of these structures, systems, or components along with a schedule showing how safety questions will be resolved prior to the initial receipt of spent fuel or high-level radioactive waste for storage at the ISFSI or MRS.

(j) The technical qualifications of the applicant to engage in the proposed activities, as required by § 72.17.

(k) A description of the applicant's plans for coping with emergencies, as required by § 72.19.

(l) A description of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal operations and expected operational occurrences. The description must identify the design objectives and the means to be used for keeping levels of radioactive material in effluents to the environment as low as is reasonably achievable and within the exposure limits stated in § 72.83. The description must include:

(1) An estimate of the quantity of each of the principal radionuclides expected to be released annually to the environment in liquid and gaseous effluents produced during normal ISFSI or MRS operations;

(2) A description of the equipment and processes used in radioactive waste systems; and

(3) A general description of the provisions for packaging, storage, and disposal of solid wastes containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(m) An analysis of the potential dose equivalent or committed dose equivalent to an individual outside the controlled area from accidents or natural phenomena events that result in the release of radioactive material to the environment or direct radiation from the ISFSI or MRS. The calculations of individual dose equivalent or committed dose equivalent must be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event.

(n) A description of the quality assurance program that satisfies the requirements of Subpart G to be applied to the design, fabrication, construction, testing, operation, modification, and decommissioning of the structures, systems, and components of the ISFSI or MRS important to safety. The description must identify the structures, systems, and components important to safety. The program must also apply to managerial and administrative controls used to ensure safe operation of the ISFSI or MRS.

(o) A description of the detailed security measures for physical protection, including design features and the plans required by Subpart H. For an application from DOE for an ISFSI or MRS, DOE will provide a description of the physical security plan for protection against radiological sabotage as required by Subpart H. An application submitted by DOE for an ISFSI or MRS must include a certification that it will provide at the ISFSI or MRS such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security.

(p) A description of the program covering preoperational testing and initial operations.

(q) A description of the decommissioning plan required under § 72.18.

§ 72.16 Contents of application: Technical specifications.

Each application under this part shall include proposed technical specifications in accordance with the requirements of § 72.33 and a summary statement of the bases and justifications for these technical specifications.

§ 72.17 Contents of application: Applicant's technical qualifications.

Each application under this part must include:

- (a) The technical qualifications, including training and experience, of the applicant to engage in the proposed activities.
- (b) A description of the personnel training program required under Subpart I.
- (c) A description of the applicant's operating organization, delegations of responsibility and authority, and the minimum skills and experience qualifications relevant to the various levels of responsibility and authority.
- (d) A commitment by the applicant to have and maintain an adequate complement of trained and certified installation personnel prior to the receipt of spent fuel or high-level radioactive waste for storage.

§ 72.18 Decommissioning plan, including financing and recordkeeping.

- (a) Each application under this part must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel or high-level radioactive waste has been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI or MRS that facilitate its decontamination and decommissioning at the end of its useful life.
- (b) The decommissioning plan must include the financial arrangements made by the applicant to provide reasonable assurance that the planned decontamination and decommissioning will be carried out.

§ 72.19 Emergency plan.

An application to store spent fuel in an ISFSI or to store spent fuel and high-level radioactive waste in an MRS must include plans for coping with emergencies.

(a) An emergency plan must include the following:

(1) Facility description: A brief description of the licensee's facility and area near the site.

(2) Types of accidents: An identification of each type of accident for which protective actions may be needed.

(3) Classification of accidents: A classification system for classifying accidents as site area emergencies or general emergencies.

(4) Detection of accidents: Identification of the means of detecting each type of accident in a timely manner.

(5) Mitigation of consequences: A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(6) Assessment of releases: A brief description of the methods and equipment to assess releases of radioactive materials.

(7) Responsibilities: A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(8) Notification and coordination: A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for

the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify NRC immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.

(9) Information to be communicated: A brief description of the types of information on facility status, radioactive releases, and recommended actions, if necessary, to be given to offsite response organizations and to the NRC.

(10) Training: A brief description of the training the licensee will provide workers on how to respond to an emergency and any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel.

(11) Safe shutdown: A brief description of the means of restoring the facility to a safe condition after an accident.

(12) Exercises and audits: Provisions for conducting quarterly communications checks with offsite response organizations and annual onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations shall include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the annual exercises. Participation of offsite response organizations in annual exercises although strongly recommended is not required. Exercises must use scenarios not known to exercise participants. The licensee shall conduct an audit of each exercise using individuals not having direct

implementation responsibility for the plan. Audits must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the audits must be corrected.

(13) Hazardous chemicals: A description sufficient to demonstrate the applicant's compliance with the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, if applicable to the applicant's activities at the proposed place of storage of the spent nuclear fuel or high-level waste.

(b) The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to NRC. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(c) For an ISFSI that is located on the site of a nuclear power reactor licensed for operation by the Commission, the emergency plan required by 10 CFR 50.47 shall be deemed to satisfy the requirements of this section.

§ 72.20 Environmental report.

Each application for an ISFSI or MRS license under this part must be accompanied by an Environmental Report which meets the requirements of Subpart A of Part 51 of this chapter.

§ 72.21 (Reserved)

Subpart C--Issuance and Conditions of License

§ 72.31 Issuance of license.

(a) Except as provided in paragraph (c) of this section, the Commission will issue a license under this part upon a determination that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that:

(1) The applicant's proposed ISFSI or MRS design complies with Subpart F;

(2) The proposed site complies with the criteria in Subpart E;

(3) If on the site of a nuclear power plant or other licensed activity or facility, the proposed ISFSI would not pose an undue risk to the safe operation of such nuclear power plant or other licensed activity or facility;

(4) The applicant is qualified by reason of training and experience to conduct the operation covered by the regulations in this part;

(5) The applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate;

(6) Except for DOE, the applicant for an ISFSI or MRS is financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(7) The applicant's quality assurance plan complies with Subpart G;

(8) The applicant's physical protection provisions comply with Subpart H. DOE has complied with the safeguards and physical security provisions identified in § 72.15(o);

(9) The applicant's personnel training program complies with Subpart I;

(10) Except for DOE, the applicant's decommissioning plan and its financing pursuant to § 72.18 provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public;

(11) The applicant's emergency plan complies with § 72.19;

(12) The applicable provisions of Part 170 of this chapter have been satisfied;

(13) There is reasonable assurance that (i) the activities authorized by the license can be conducted without endangering the health and safety of the public and (ii) these activities will be conducted in compliance with the applicable regulations of this chapter; and

(14) The issuance of the license will not be inimical to the common defense and security.

(b) Grounds for denial of a license to store spent fuel in the proposed ISFSI or to store spent fuel and high-level radioactive waste in the proposed MRS may be the commencement of construction prior to (1) a finding by the Director, Office of Nuclear Materials Safety and Safeguards or designee or (2) a finding after a public hearing by the presiding officer, Atomic Safety and Licensing Board, Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body, as appropriate that the action called for is the issuance of the proposed license with any appropriate conditions to protect environmental values. This finding is to be made on the basis of information filed and evaluations made pursuant to Subpart A of Part 51 of this chapter or in the case of an MRS on the basis of evaluations made pursuant to sections 141(c) or

148(a) and (c) of NWPA, as appropriate, and after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives.

(c) For facilities that have been covered under previous licensing actions including the issuance of a construction permit under Part 50 of this chapter, a reevaluation of the site is not required except where new information is discovered which could alter the original site evaluation findings. In this case, the site evaluation factors involved will be reevaluated.

§ 72.32 Duration of license; renewal.

(a) Each license issued under this part must be for a fixed period of time to be specified in the license. The license term for an ISFSI must not exceed 20 years from the date of issuance. The license term for an MRS must not exceed 40 years from the date of issuance. Licenses for either type of installation may be renewed by the Commission at the expiration of the license term upon application by the licensee and pursuant to the requirements of this rule.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of Subpart B at least two years prior to the expiration of the existing license. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference: Provided, that such references are clear and specific.

(c) In any case in which a licensee, not less than two years prior to expiration of its existing license, has filed an application in proper form for renewal of a license, the existing license shall not expire

until a final decision concerning the application for renewal has been made by the Commission.

§ 72.33 License conditions.

(a) Each license issued under this part must include license conditions. The license conditions may be derived from the analyses and evaluations included in the Safety Analysis Report and amendments thereto submitted pursuant to § 72.15. License conditions pertain to design, construction and operation. The Commission may also include additional license conditions as it finds appropriate.

(b) Each license issued under this part must be subject to the following conditions, even if they are not explicitly stated therein;

(1) Neither the license nor any right thereunder shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the Atomic Energy Act of 1954, as amended, and give its consent in writing.

(2) The license must be subject to revocation, suspension, modification, or amendment in accordance with the procedures provided by the Atomic Energy Act of 1954, as amended, and Commission regulations.

(3) Upon request of the Commission, the licensee shall, at any time before expiration of the license, submit written statements, signed under oath or affirmation if appropriate, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(4) Prior to the receipt of spent fuel for storage at an ISFSI or the receipt of spent fuel and high-level radioactive waste for storage at an MRS, the licensee shall have in effect an NRC-approved program covering the training and certification of personnel that meets the requirements of Subpart I.

(5) The licensee shall permit the operation of the equipment and controls that are important to safety of the ISFSI or the MRS only by personnel whom the licensee has certified as being adequately trained to perform such operations, or by uncertified personnel who are under the direct visual supervision of a certified individual.

(c) Each license issued under this part must include technical specifications. Technical specifications must include requirements in the following categories:

(1) Functional and operating limits and monitoring instruments and limiting control settings. (i) Functional and operating limits for an ISFSI or MRS are limits on fuel or waste handling and storage conditions that are found to be necessary to protect the integrity of the stored fuel or waste container, to protect employees against occupational exposures and to guard against the uncontrolled release of radioactive materials; and (ii) Monitoring instruments and limiting control settings for an ISFSI or MRS are those related to fuel or waste handling and storage conditions having significant safety functions.

(2) Limiting conditions. Limiting conditions are the lowest functional capability or performance levels of equipment required for safe operation.

(3) Surveillance requirements. Surveillance requirements include: (i) inspection and monitoring of spent fuel or high-level radioactive waste in storage; (ii) inspection, test and calibration activities to ensure that the necessary integrity of required systems and components is maintained; (iii) confirmation that operation of the ISFSI or MRS is within the required functional and operating limits; and (iv) confirmation that the limiting conditions required for safe storage are met.

(4) Design features. Design features include items that would have a significant effect on safety if altered or modified, such as materials of construction and geometric arrangements.

(5) Administrative controls. Administrative controls include the organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel in an ISFSI and the storage of spent fuel and high-level radioactive waste in an MRS are performed in a safe manner.

(d) Each license authorizing the receipt, handling, and storage of spent fuel or high-level radioactive waste under this part must include technical specifications that, in addition to stating the limits on the release of radioactive materials for compliance with limits of Part 20 of this chapter and the "as low as is reasonably achievable" objectives for effluents, require that:

(1) Operating procedures for control of effluents be established and followed, and equipment in the radioactive waste treatment systems be maintained and used, to meet the requirements of § 72.83;

(2) An environmental monitoring program be established to ensure compliance with the technical specifications for effluents; and

(3) An annual report be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 60 days after January 1 of each year, specifying the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous 12 months of operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. On the basis of this report and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

(e) The licensee shall make no change that would decrease the effectiveness of the physical security plan prepared pursuant to § 72.201 without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 72.39. A licensee may make changes to the physical security plan without prior Commission approval, provided that such changes do not decrease the effectiveness of the plan. The licensee shall furnish to the Commission a report containing a description of each change within two months after the change is made, and shall maintain records of changes to the plan made without prior Commission approval for a period of 3 years from the date of the change.

(f) A licensee shall follow and maintain in effect an emergency plan that is approved by the Commission. The licensee may make changes to the approved plan without Commission approval only if such changes do

not decrease the effectiveness of the plan. Within six months after any change is made, the licensee shall submit a report containing a description of any changes made in the plan to the appropriate NRC Regional Office specified in Appendix D to Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Proposed changes that decrease the effectiveness of the approved emergency plan must not be implemented unless the licensee has received prior approval of such changes from the Commission.

(g) A license issued to DOE under this part for an MRS authorized by section 142(b) of NWSA must include the following conditions:

(1) Construction of the MRS may not begin until the Commission has authorized the construction of a repository under section 114(d) of NWSA and Part 60 of this chapter;

(2) Construction of the MRS or acceptance of spent nuclear fuel or high-level radioactive waste at the MRS is prohibited during such time as the repository license is revoked by the Commission or construction of the repository ceases;

(3) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 10,000 metric tons of heavy metal until a repository authorized under NWSA and Part 60 of this chapter first accepts spent nuclear fuel or solidified high-level radioactive waste; and

(4) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 15,000 metric tons of heavy metal.

§ 72.34 Public hearings.

(a) In connection with each application for a license under this part, the Commission shall issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with §§ 2.105 or 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(b)(1) In connection with each application for an amendment to a license under this part, the Commission shall, except as provided in paragraph (b)(2) of this section, issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with §§ 2.105 or 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(2) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee may dispense with a notice of proposed action and opportunity for hearing or a notice of hearing and take immediate action on an amendment to a license issued under this part upon a determination that the amendment does not present a genuine issue as to whether the health and safety of the public will be significantly affected. After taking the action, the Director or the Director's designee shall promptly publish a notice in the Federal Register of the action taken and of the right of interested persons to request a hearing on whether the action should be rescinded or modified. If the action taken amends an MRS license, the Director or the Director's designee shall also inform the appropriate State and local officials.

(c) The notice of proposed action and opportunity for hearing or the notice of hearing may be included in the notice of docketing required to be published by § 72.11 of this part.

(d) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice of proposed action and opportunity for hearing, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee may take the proposed action, and thereafter shall promptly inform the appropriate State and local officials and publish a notice in the Federal Register of the action taken. In accordance with § 2.764(c) of this chapter, the Director, Office of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an ISFSI or an MRS until expressly authorized to do so by the Commission.

§ 72.35 Changes, tests, and experiments.

(a)(1) The holder of a license issued under this part may (i) make changes in the ISFSI or MRS described in the Safety Analysis Report, (ii) make changes in the procedures described in the Safety Analysis Report, or (iii) conduct tests or experiments not described in the Safety Analysis Report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, a significant increase in occupational exposure or a significant unreviewed environmental impact.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment

important to safety previously evaluated in the Safety Analysis Report may be increased; (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

(b)(1) The licensee shall maintain records of changes in the ISFSI or MRS and of changes in procedures made pursuant to this section if these changes constitute changes in the ISFSI or MRS or procedures described in the Safety Analysis Report. The licensee shall also maintain records of tests and experiments carried out pursuant to paragraph (a) of this section. These records must include a written safety evaluation that provides the bases for the determination that the change, test, or experiment does not involve an unreviewed safety question. The records of changes in the ISFSI or MRS and of changes in procedures and records of tests must be maintained until the Commission terminates the license.

(2) Annually, or at such shorter interval as may be specified in the license, the licensee shall furnish to the appropriate regional office, specified in Appendix D of Part 20 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a brief description of changes, tests, and experiments made under paragraph (a) of the section, including a summary of the safety evaluation of each. Any report submitted by a licensee pursuant to this paragraph will be made a part of the public record pertaining to this license.

(c) The holder of a license issued under this part who desires (1) to make changes in the ISFSI or MRS or the procedures as described

in the Safety Analysis Report, or to conduct tests or experiments not described in the Safety Analysis Report, that involve an unreviewed safety question, a significant increase in occupational exposure, or significant unreviewed environmental impact, or (2) to change the license conditions shall submit an application for amendment of the license, pursuant to § 72.39.

§ 72.36 Transfer of license.

(a) No license or any right included in a license issued under this part for an ISFSI or MRS shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license must include as much of the information described in §§ 72.14 and 72.17 with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application must also include a statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right--subject to the licensing requirements of the Act

and these regulations--to possession of the radioactive materials and the storage installation involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines that:

(1) The proposed transferee is qualified to be the holder of the license; and

(2) Transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission.

§ 72.37 Creditor regulations.

(a) This section does not apply to an ISFSI or MRS constructed and operated by DOE.

(b) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not owned by the United States that is the subject of a license or on any interest in special nuclear material in spent fuel; Provided:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing possession or the transfer of the license.

(c) Any creditor so secured may apply for transfer of the license covering spent fuel by filing an application for transfer of the license pursuant to § 72.36(b). The Commission will act upon the application pursuant to § 72.36(c).

(d) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(e) As used in this section, "creditor" includes, without implied limitation, the trustee under any mortgage, pledge, or lien on spent fuel in storage made to secure any creditor; any trustee or receiver of spent fuel appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien; any purchaser of the spent fuel at the sale thereof upon foreclosure of the mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or any assignee of any such purchaser.

§ 72.38 Application for termination of license.

(a) The licensee shall apply to the Commission for authority to surrender a license voluntarily and to decommission the ISFSI or MRS and dispose of the materials stored therein. The Commission may require information, including information as to proposed procedures for the disposal of radioactive material and decontamination of the site, to determine whether there is reasonable assurance that the decommissioning

and disposal will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public.

(b) Upon a finding of reasonable assurance that the decommissioning of the ISFSI or MRS and disposal of the materials stored therein will be performed in accordance with the regulations in this chapter and will provide adequate protection to the health and safety of the public, and after notice to interested persons, the Commission will authorize decommissioning and disposal and terminate the license upon completion of decommissioning procedures in accordance with any conditions specified in the authorization.

§ 72.39 Application for amendment of license.

Whenever a holder of a license desires to amend the license, an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

§ 72.40 Issuance of amendment.

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

§ 72.41 Modification, revocation, and suspension of license.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic

Energy Act of 1954, as amended, or by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following:

(1) Any material false statement in the application or in any statement of fact required under Section 182 of the Act;

(2) Conditions revealed by the application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application;

(3) Failure to operate an ISFSI or MRS in accordance with the terms of the license;

(4) Violation of, or failure to observe, any of the terms and conditions of the Act, or of any applicable regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission prior to following any of the procedures provided under sections 551-558 of Title 5 of the United States Code, may cause the taking of possession of any special nuclear material contained in spent fuel held by the licensee.

§ 72.42 Backfitting.

(a) As used in this section, "backfitting" means the addition, elimination, or modification, after the license has been issued, of

- (1) structures, systems, or components of an ISFSI or MRS, or
- (2) procedures or organization required to operate an ISFSI or MRS.

(b) The Commission will require backfitting of an ISFSI or MRS if it finds that such action is necessary to assure adequate protection to occupational or public health and safety, or to bring the ISFSI or MRS into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by a licensee.

(c) The Commission may require the backfitting of an ISFSI or MRS if it finds (1) that there is a substantial increase in the overall protection of the occupational or public health and safety to be derived from the backfit, and (2) that the direct and indirect costs of implementation for that ISFSI or MRS are justified in view of this increased protection.

(d) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of an ISFSI or MRS as it deems appropriate.

Subpart D--Records, Reports, Inspections, and Enforcement

§ 72.50 Safety analysis report updating.

(a) The design, description of planned operations, and other information submitted in the Safety Analysis Report shall be updated by the licensee and submitted to the Commission at least once every six months after issuance of the license during final design and construction, until preoperational testing is completed, with final Safety Analysis Report completion and submittal to the Commission at least 90 days prior to the planned receipt of spent fuel or high-level radioactive waste. The final submittal must include a final analysis and evaluation of the design and

performance of structures, systems, and components that are important to safety taking into account any pertinent information developed since the submittal of the license application.

(b) After the first receipt of spent fuel or high-level radioactive waste for storage, the Safety Analysis Report must be updated annually and submitted to the Commission by the licensee. This submittal must include the following:

(1) New or revised information relating to applicable site evaluation factors, including the results of environmental monitoring programs.

(2) A description and analysis of changes in the structures, systems, and components of the ISFSI or MRS, with emphasis upon (i) performance requirements, (ii) the bases, with technical justification therefor upon which such requirements have been established, and (iii) evaluations showing that safety functions will be accomplished.

(3) An analysis of the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed to meeting the requirements of which are applicable to the design, construction, or operation of the ISFSI or MRS.

§ 72.51 Material balance, inventory, and records requirements for stored materials.

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all spent fuel and high-level radioactive waste in storage. The records must include as a minimum the name of shipper of the material to the ISFSI or MRS, the estimated quantity of radioactive material per item (including special nuclear material in spent fuel), item identification and seal number,

storage location, onsite movements of each fuel assembly or storage canister, and ultimate disposal. These records for spent fuel at an ISFSI or for spent fuel and high-level radioactive waste at a MRS must be retained for as long as the material is stored and for a period of five years after the material is disposed of or transferred out of the ISFSI or MRS.

(b) Each licensee shall conduct a physical inventory of all spent fuel and high-level radioactive waste in storage at intervals not to exceed 12 months unless otherwise directed by the Commission. The licensee shall retain a copy of the current inventory as a record until the Commission terminates the license.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for material in storage. The licensee shall retain a copy of the current material control and accounting procedures until the Commission terminates the license.

(d) Records of spent fuel and high-level radioactive waste in storage must be kept in duplicate. The duplicate set of records must be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel transferred out of an ISFSI or of spent fuel or high-level radioactive waste transferred out of an MRS must be preserved for a period of five years after the date of transfer.

§ 72.52 Reports of accidental criticality or loss of special nuclear material.

(a) Each licensee shall notify the NRC Operations Center¹ within one hour of discovery of accidental criticality or any loss of special nuclear material.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or any other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) of this chapter applies to all telephonic reports required by this section.

(c) Reports required under § 73.71 of this chapter need not be duplicated under the requirements of this section.

§ 72.53 Material status reports.

(a) Except as provided in paragraph (b) of this section, each licensee shall complete and submit to the Commission (on DOE/NRC Form-742, Material Balance Report) material status reports in accordance with the printed instructions for completing the form. These reports must provide information concerning the special nuclear material contained in the spent fuel possessed, received, transferred, disposed of, or lost by the licensee. Material status reports must be made as of March 31 and September 30 of each year and filed within 30 days after the end of the period covered by

¹Commercial telephone number of the NRC Operations Center is (301)951-0550.

the report. The Commission may, when good cause is shown, permit a licensee to submit Material Status Reports at other times.

(b) Any licensee who is required to submit routine material status reports pursuant to § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.54 Nuclear material transfer reports.

(a) Except as provided in paragraph (b) of this section, whenever the licensee transfers or receives spent fuel, the licensee shall prepare and distribute a Nuclear Material Transaction Report, DOE/NRC Form-741, in accordance with printed instructions for completion. An ISFSI licensee who receives spent fuel from a foreign supplier shall complete both the supplier's and receiver's portions of the form, verify the identity of the spent fuel, and indicate the quantity of the receiver's portion of the form.

(b) Any licensee who is required to submit material status reports on DOE/NRC Form-741 pursuant to § 75.34 of this chapter shall submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.55 Other records and reports.

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules,

regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee, shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission.

(c) Records that are required by the regulations in this part or by the license conditions must be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, the above records must be maintained until the Commission terminates the license.

(d) Any record that must be maintained pursuant to this part may be either the original or a reproduced copy by any state of the art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

§ 72.56 Inspections and tests.

(a) Each licensee under this part shall permit inspection by duly authorized representatives of the Commission of its records, premises, and activities and of spent fuel or high-level radioactive waste in its possession related to the specific license as may be necessary to effectuate the purposes of the Act, including section 105 of the Act.

(b) Each licensee under this part shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, packaging, or transfer of spent fuel or high-level radioactive waste.

(c)(1) Each licensee under this part shall upon request by the Director, Office of Nuclear Material Safety and Safeguards provide rent-

free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office must be convenient to and have full access to the installation and provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary, and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other onsite space, is suggested as a guide. For sites containing multiple facilities, additional space may be requested to accommodate additional full-time inspectors. The office space that is provided must be subject to the approval of the Director, Office of Enforcement. All furniture, supplies and Commission equipment will be furnished by the Commission.

(3) Each licensee under this part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Administrator as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part.

(e) A report of the preoperational test acceptance criteria and test results must be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, at least 30 days prior to the receipt of spent fuel or high-level radioactive waste.

§ 72.57 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, as amended, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Atomic Energy Act for violation of Sections 53, 57, 62, 63, 81, or 82 of the Atomic Energy Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Atomic Energy Act. Any person who willfully violates any provision of the Atomic Energy Act, or any regulation or order issued thereunder, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

Subpart E - Siting Evaluation Factors

§ 72.70 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI or MRS must be investigated and assessed.

(b) Proposed sites for the ISFSI or MRS must be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI or MRS.

(c) Design basis external events must be determined for each combination of proposed site and proposed ISFSI or MRS design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI or MRS design shall be deemed unsuitable for the location of the ISFSI or MRS.

(e) Pursuant to Subpart A of Part 51 of this chapter for each proposed site for an ISFSI and pursuant to sections 141 or 148 of NWPA, as appropriate (96 Stat. 2241, __ Stat. ____, 42 U.S.C. 10161, __) for each proposed site for an MRS, the potential for radiological and other environmental impacts on the region must be evaluated with due consideration of the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility must be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

§ 72.71 Design basis external natural events.

(a) Natural phenomena that may exist or that can occur in the region of a proposed site must be identified and assessed according to their potential effects on the safe operation of the ISFSI or MRS. The important natural phenomena that affect the ISFSI or MRS design must be identified.

(b) Records of the occurrence and severity of those important natural phenomena must be collected for the region and evaluated for

reliability, accuracy, and completeness. The applicant shall retain these records until the license is issued.

(c) Appropriate methods must be adopted for evaluating the design basis external natural events based on the characteristics of the region and the current state of knowledge about such events.

§ 72.73 Design basis external man-induced events.

(a) The region must be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI or MRS. The important potential man-induced events that affect the ISFSI or MRS design must be identified.

(b) Information concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods must be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

§ 72.75 Siting limitations.

(a) An ISFSI which is owned and operated by DOE must not be located at any site within which there is a candidate site for a HLW repository. This limitation shall apply until such time as DOE decides that such candidate site is no longer a candidate site under consideration for development as a HLW repository.

(b) An MRS must not be sited in any state in which there is located any site approved for site characterization for a HLW repository. This

limitation shall apply until such time as DOE decides that the candidate site is no longer a candidate site under consideration for development as a repository. This limitation shall continue to apply to any site selected for construction as a repository.

(c) If an MRS is located, or is planned to be located, within 50 miles of the first HLW repository, any Commission decision approving the first HLW repository application must limit the quantity of spent fuel or high-level radioactive waste that may be stored. This limitation shall prohibit the storage of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal, or a quantity of solidified high-level radioactive waste resulting from the reprocessing of such a quantity of spent fuel, in both the repository and the MRS until such time as a second repository is in operation.

(d) An MRS authorized by section 142(b) of NWPA may not be constructed in the State of Nevada. The quantity of spent nuclear fuel or high-level radioactive waste that may be stored at an MRS authorized by section 142(b) of NWPA shall be subject to the limitations in § 72.33(g) of this part instead of the limitations in paragraph (c) of this section.

§ 72.77 Identifying regions around an ISFSI or MRS site.

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI or MRS must be identified.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential

measurable effects on the population or the environment from ISFSI or MRS activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to (1) the present and future character and the distribution of population, (2) consideration of present and projected future uses of land and water within the region, and (3) any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

§ 72.79 Defining potential effects of the ISFSI or MRS on the region.

(a) The proposed site must be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site must be evaluated with respect to the effects on the regional environment resulting from construction, operation, and decommissioning for the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics must be taken into account.

§ 72.81 Geological and seismological characteristics.

(a)(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO, Charleston, SC, and Attica, NY, sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional

geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) For those sites that have been evaluated under paragraph (a)(1) of this section that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized design earthquake (DE) described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific DE may be determined by using the criteria and level of investigations required by Appendix A of Part 100 of this chapter.

(b) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of Appendix A of Part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(c) Sites other than bedrock sites must be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(d) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(e) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(f) The design earthquake (DE) for use in the design of structures must be determined as follows:

(1) For sites that have been evaluated under the criteria of Appendix A of 10 CFR Part 100, the DE must be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(2) Regardless of the results of the investigations anywhere in the continental U.S., the DE must have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

§ 72.83 Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area must not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to (1) planned discharges of radioactive materials, radon and its decay products excepted, to the general environment, (2) direct radiation from ISFSI or MRS operations, and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions must be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations.

(c) Operational limits must be established for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations to meet the limits given in paragraph (a) of this section.

§ 72.85 Controlled area of an ISFSI or MRS.

(a) For each ISFSI or MRS site, a controlled area must be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to the whole body or any organ from any design basis accident. The minimum distance from the spent fuel or high-level radioactive waste handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

§ 72.87 (Reserved)

§ 72.89 Spent fuel or high-level radioactive waste transportation.

The proposed ISFSI or MRS must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel or high-level radioactive waste within the region.

Subpart F - General Design Criteria

§ 72.91 General considerations.

(a) Pursuant to the provisions of § 72.15, an application to store spent fuel in an ISFSI or to store spent fuel or high-level radioactive waste in an MRS must include the design criteria for the proposed storage installation. These design criteria establish the design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this subpart establish minimum requirements

for the design criteria for an ISFSI or MRS. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI or MRS.

(b) The MRS must be designed to store either spent fuel or solid high-level radioactive wastes. Liquid high-level radioactive wastes may not be received or stored in an MRS. If the MRS is a water-pool type facility, the solidified waste form shall be a durable solid with excellent leach resistance.

§ 72.92 Overall requirements.

(a) Quality Standards. Structures, systems, and components important to safety must be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) Protection against environmental conditions and natural phenomena.

(1) Structures, systems, and components important to safety must be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated with normal operation, maintenance, and testing of the ISFSI or MRS and to withstand postulated accidents.

(2) Structures, systems, and components important to safety must be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunami, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components must reflect (i) appropriate consideration of the most severe of the natural phenomena reported for the

site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and (ii) appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena. The ISFSI or MRS should also be designed to prevent massive collapse of building structures or the dropping of heavy objects as a result of building structural failure on to the spent fuel or high-level radioactive waste or on to structures, systems, and components important to safety.

(3) Capability must be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI or MRS is located over an aquifer which is a major water resource, measures must be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

(c) Protection against fires and explosions. Structures, systems, and components important to safety must be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-resistant materials must be used wherever practical throughout the ISFSI or MRS, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI or MRS must include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) Sharing of structures, systems, and components. Structures, systems, and components important to safety must not be shared between an ISFSI or MRS and other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) Proximity of sites. An ISFSI or MRS located near other nuclear facilities must be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) Testing and maintenance of systems and components. Systems and components that are important to safety must be designed to permit inspection, maintenance, and testing.

(g) Emergency capability. Structures, systems, and components important to safety must be designed for emergencies. The design must provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) Confinement barriers and systems.

(1) The spent fuel cladding must be protected during storage against degradation that leads to gross ruptures or the fuel must be otherwise confined such that degradation of the fuel during storage will not pose operational safety problems with respect to its removal from storage. This may be accomplished by canning of consolidated fuel rods or unconsolidated assemblies or other means as appropriate.

(2) For underwater storage of spent fuel or high-level radioactive waste in which the pool water serves as a shield and a confinement medium

for radioactive materials, systems for maintaining water purity and the pool water level must be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design must preclude installations of drains, permanently connected systems, and other features that could, by abnormal operations or failure, cause a significant loss of water. Pool water level equipment must be provided to alarm in a continuously manned location if the water level in the storage pools falls below a predetermined level.

(3) Ventilation systems and off-gas systems must be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(4) Storage confinement systems must have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions.

(5) The high-level radioactive waste must be packaged in a manner that allows handling and retrievability without the release of radioactive materials to the environment or radiation exposures in excess of Part 20 limits. The package must be designed to confine the high-level radioactive waste for the duration of the license.

(i) Instrumentation and control systems. Instrumentation and control systems must be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions must be identified in the Safety Analysis Report.

(j) Control room or control area. A control room or control area, if appropriate for the ISFSI or MRS design, must be designed to permit occupancy and actions to be taken to monitor the ISFSI or MRS safely under normal conditions, and to provide safe control of the ISFSI or MRS under off-normal or accident conditions.

(k) Utility or other services.

(1) Each utility service system must be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety must include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services must be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions must be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

(4) An ISFSI or MRS which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with the other facility; however, the sharing of utilities and services or the physical connection must not significantly (i) increase the probability or consequences of an accident or malfunction of components,

structures, or systems that are important to safety; or (ii) reduce the margin of safety as defined in the basis for any technical specifications of either facility.

(1) Retrievability. Storage systems must be designed to allow ready retrieval of spent fuel or high-level radioactive waste for further processing or disposal.

§ 72.93 Criteria for nuclear criticality safety.

(a) Design for criticality safety. Spent fuel handling, packaging, transfer, and storage systems must be designed to be maintained subcritical and to ensure that, before a nuclear criticality accident is possible at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety. The design of handling, packaging, transfer, and storage systems must include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the data and methods used in calculations and demonstrate safety for the handling, packaging, transfer and storage conditions and in the nature of the immediate environment under accident conditions.

(b) Methods of criticality control. When practicable the design of an ISFSI or MRS must be based on favorable geometry, permanently fixed neutron absorbing materials (poisons), or both. Where solid neutron absorbing materials are used, the design shall provide for positive means to verify their continued efficacy.

(c) Criticality Monitoring. A criticality monitoring system shall be maintained in each area where special nuclear material is handled, used, or stored which will energize clearly audible alarm signals if

accidental criticality occurs. Underwater monitoring is not required when special nuclear material is handled or stored beneath water shielding. Monitoring of dry storage areas where special nuclear material is packaged in its stored configuration under a license issued under this subpart is not required.

§ 72.94 Criteria for radiological protection.

(a) Exposure control. Radiation protection systems must be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials. Structures, systems, and components for which operation, maintenance, and required inspections may involve occupational exposure must be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design must include means to:

- (1) Prevent the accumulation of radioactive material in those systems requiring access;
- (2) Decontaminate those systems to which access is required;
- (3) Control access to areas of potential contamination or high radiation within the ISFSI or MRS;
- (4) Measure and control contamination of areas requiring access;
- (5) Minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and
- (6) Shield personnel from radiation exposure.

(b) Radiological alarm systems. Radiological alarm systems must be provided in accessible work areas as appropriate to warn operating personnel of radiation and airborne radioactive material concentrations above a given setpoint and of concentrations of radioactive material in effluents above control limits. Radiation alarm systems must be designed with provisions for calibration and testing their operability.

(c) Effluent and direct radiation monitoring.

(1) As appropriate for the handling and storage system, effluent systems must be provided. Means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions must be provided for these systems. A means of measuring the flow of the diluting medium, either air or water, must also be provided.

(2) Areas containing radioactive materials must be provided with systems for measuring the direct radiation levels in and around these areas.

(d) Effluent control. The ISFSI or MRS must be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions. Analyses must be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limits given in § 72.83. Analyses of design basis accidents must be made to show that releases to the general environment will be within the exposure limits given in § 72.85. Systems designed to monitor the release of radioactive materials must have means for calibration and testing their operability.

§ 72.95 Criteria for spent fuel, high-level radioactive waste, and other radioactive waste storage and handling.

(a) Spent fuel and high-level radioactive waste storage and handling systems. Spent fuel storage, high-level radioactive waste storage, and other systems that might contain or handle radioactive materials associated with spent fuel or high-level radioactive waste, must be designed to ensure adequate safety under normal and accident conditions. These systems must be designed with (1) a capability to test and monitor components important to safety, (2) suitable shielding for radiation protection under normal and accident conditions, (3) confinement structures and systems, (4) a heat-removal capability having testability and reliability consistent with its importance to safety, and (5) means to minimize the quantity of radioactive wastes generated.

(b) Waste treatment. Radioactive waste treatment facilities must be provided. Provisions must be made for the packaging of site-generated low-level wastes in a form suitable for storage onsite awaiting transfer to disposal sites.

§ 72.96 Criteria for decommissioning.

The ISFSI or MRS must be designed for decommissioning. Provisions must be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI or MRS is permanently decommissioned.

Subpart G--Quality Assurance

§ 72.100 Quality assurance requirements.

(a) Purpose. This subpart describes quality assurance requirements applying to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems, and components, and decommissioning that are important to safety. As used in this subpart, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to pre-determined requirements.

(b) Establishment of program. Each licensee² shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria of this subpart, and satisfying any specific provisions which are applicable to the licensee's activities. The licensee shall execute the applicable criteria in a graded approach to an extent that is commensurate with the importance to safety. The quality assurance program must cover the activities identified in § 72.15(n) throughout the life of the licensed activity, from the site selection through decommissioning, prior to termination of the license.

(c) Approval of program. Prior to receipt of spent fuel at the ISFSI or spent fuel and high-level radioactive waste at the MRS, each licensee shall obtain Commission approval of its quality assurance program. Each licensee shall file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and

how they will be satisfied, with the Director, Office of Nuclear Material and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(d) Previously approved programs. A Commission-approved quality assurance program which satisfies the applicable criteria of Appendix B to Part 50 of this chapter and which is established, maintained, and executed with regard to an ISFSI will be accepted as satisfying the requirements of paragraph (b) of this section. Prior to first use, the licensee shall notify the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, of its intent to apply its previously approved Appendix B program to ISFSI activities. The licensee shall identify the program by date of submittal to the Commission, docket number, and date of Commission approval.

§ 72.101 Quality assurance organization.

The licensee shall be responsible for the establishment and execution of the quality assurance program. The licensee may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program. The licensee shall clearly establish and delineate in writing the authority and duties of persons and organizations performing activities affecting the functions of structures, systems and components which are important to safety. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions. The quality assurance functions are (a) assuring that an appropriate quality assurance program is established and effectively executed and (b) verifying, by procedures such as checking, auditing, and inspection, that activities affecting the

functions that are important to safety have been correctly performed.

The persons and organizations performing quality assurance functions must have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The persons and organizations performing quality assurance functions shall report to a management level that ensures that the required authority and organizational freedom, including sufficient independence from cost and schedule considerations when these considerations are opposed to safety considerations, are provided.

Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this section are being performed must have direct access to the levels of management necessary to perform this function.

§ 72.103 Quality assurance program.

(a) The licensee shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this subpart. The licensee shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance

with these procedures throughout the period during which the ISFSI or MRS is licensed. The licensee shall identify the structures, systems, and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(b) The licensee, through its quality assurance program, shall provide control over activities affecting the quality of the identified structures, systems, and components to an extent commensurate with the importance to safety, and as necessary to ensure conformance to the approved design of each ISFSI or MRS. The licensee shall ensure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee shall take into account the need for special controls, processes, test equipment, tools and skills to attain the required quality and the need for verification of quality by inspection and test.

(c) The licensee shall base the requirements and procedures of its quality assurance program on the following considerations concerning the complexity and proposed use of the structures, systems, or components:

- (1) The impact of malfunction or failure of the item on safety;
- (2) The design and fabrication complexity or uniqueness of the item;
- (3) The need for special controls and surveillance over processes and equipment;

(4) The degree to which functional compliance can be demonstrated by inspection or test; and

(5) The quality history and degree of standardization of the item.

(d) The licensee shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to ensure that suitable proficiency is achieved and maintained. The licensee shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

§ 72.105 Design control.

(a) The licensee shall establish measures to ensure that applicable regulatory requirements and the design basis, as specified in the license application for those structures, systems, and components to which this section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to ensure that appropriate quality standards are specified and included in design documents and that deviations from standards are controlled. Measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the functions of the structures, systems, and components which are important to safety.

(b) The licensee shall establish measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures must include the establishment of

written procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews, alternate or simplified calculational methods, or by a suitable testing program. For the verifying or checking process, the licensee shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, the licensee shall include suitable qualification testing of a prototype or sample unit under the most adverse design conditions. The licensee shall apply design control measures to items such as the following: criticality physics, radiation, shielding, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; features to facilitate decontamination; and delineation of acceptance criteria for inspections and tests.

(c) The licensee shall subject design changes, including field changes, to design control measures commensurate with those applied to the original design. Changes in the conditions specified in the license require NRC approval.

§ 72.107 Procurement document control.

The licensee shall establish measures to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are included or referenced in the documents for procurement of material, equipment, and services, whether

purchased by the licensee or by its contractors or subcontractors. To the extent necessary, the licensee shall require contractors or subcontractors to provide a quality assurance program consistent with the applicable provisions of this subpart.

§ 72.109 Instructions, procedures, and drawings.

The licensee shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

§ 72.111 Document control.

The licensee shall establish measures to control the issuance of documents such as instructions, procedures, and drawings, including changes, which prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed. These measures must ensure that changes to documents are reviewed and approved.

§ 72.113 Control of purchased material, equipment, and services.

(a) The licensee shall establish measures to ensure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents.

These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.

(b) The licensee shall have available documentary evidence that material and equipment conform to the procurement specifications prior to installation or use of the material and equipment. The licensee shall retain or have available this documentary evidence for the life of ISFSI or MRS. The licensee shall ensure that the evidence is sufficient to identify the specific requirements met by the purchased material and equipment.

(c) The licensee or designee shall assess the effectiveness of the control of quality by contractors and subcontractors at intervals consistent with the importance, complexity, and quantity of the product or services.

§ 72.115 Identification and control of materials, parts, and components.

The licensee shall establish measures for the identification and control of materials, parts, and components. These measures must ensure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item as required, throughout fabrication, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective materials, parts, and components.

§ 72.117 Control of special processes.

The licensee shall establish measures to ensure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

§ 72.119 Licensee inspection.

The licensee shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or products processed must be performed for each work operation where necessary to assure quality. If direct inspection of processed material or products cannot be carried out, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when quality control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the licensee's designated representative and beyond which work should not proceed without the consent of its designated representative, are required, the specific hold points must be indicated in appropriate documents.

§ 72.121 Test control.

The licensee shall establish a test program to ensure that all testing required to demonstrate that the structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures that incorporate the requirements of this part and the requirements and acceptance limits contained in the ISFSI or MRS license. The test procedures must include provisions for assuring that all prerequisites for the given test are met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. The licensee shall document and evaluate the test results to ensure that test requirements have been satisfied.

§ 72.123 Control of measuring and test equipment.

The licensee shall establish measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

§ 72.125 Handling, storage, and shipping control.

The licensee shall establish measures to control, in accordance with work and inspection instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, and specific moisture content and temperature levels must be specified and provided.

§ 72.127 Inspection, test, and operating status.

(a) The licensee shall establish measures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the ISFSI or MRS. These measures must provide for the identification of items which have satisfactorily passed required inspections and tests where necessary to preclude inadvertent bypassing of the inspections and tests.

(b) The licensee shall establish measures to identify the operating status of structures, systems, and components of the ISFSI or MRS, such as tagging valves and switches, to prevent inadvertent operation.

§ 72.129 Nonconforming materials, parts or components.

The licensee shall establish measures to control materials, parts, or components that do not conform to the licensee's requirements in order to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

§ 72.131 Corrective action.

The licensee shall establish measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures must ensure that the cause of the condition is

determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

§ 72.133 Quality assurance records.

The licensee shall maintain sufficient records to furnish evidence of activities affecting quality. The records must include the following: design records, records of use and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records must include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records must, at a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any noted deficiencies. Records must be identifiable and retrievable. Records pertaining to the design, fabrication, erection, testing, maintenance, and use of structures, systems, and components important to safety shall be maintained by or under the control of the licensee until the Commission terminates the license.

§ 72.135 Audits.

The licensee shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the

areas being audited. Audited results must be documented and reviewed by management having responsibility in the area audited. Follow-up action, including re-audit of deficient areas, must be taken where indicated.

Subpart H--Physical Protection

§ 72.201 Physical security plan.

The licensee shall establish a detailed plan for security measures for physical protection. The licensee shall retain a copy of the current plan as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the plan is superseded, retain the superseded material for three years after each change. This plan must consist of two parts. Part I must demonstrate how the applicant plans to comply with the applicable requirements of Part 73 of this chapter and during transportation to and from the proposed ISFSI or MRS and must include the design for physical protection and the licensee's safeguards contingency plan and guard training plan. Part II must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

§ 72.202 Design for physical protection.

The design for physical protection must show the site layout and the design features provided to protect the ISFSI or MRS from sabotage. It must include:

(a) The design criteria for the physical protection of the proposed ISFSI or MRS;

(b) The design bases and the relation of the design bases to the design criteria submitted pursuant to paragraph (a) of this section; and

(c) Information relative to materials of construction, equipment, general arrangement, and proposed quality assurance program sufficient to provide reasonable assurance that the final security system will conform to the design bases for the principal design criteria submitted pursuant to paragraph (a) of this section.

§ 72.203 Safeguards contingency plan.

(a) The requirements of the licensee's safeguards contingency plan for dealing with threats and radiological sabotage must be as defined in § 73.40(b) of this chapter. This plan must include Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix, the first four categories of information relating to nuclear facilities licensed under Part 50 of this chapter. (The fifth category of information, Procedures, does not have to be submitted for approval.)

(b) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C to 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the licensee's safeguards contingency plan. The licensee shall retain a copy of the current procedures as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

§ 72.204 Change to physical security and safeguards contingency plans.

(a) The licensee shall make no change that would decrease the safeguards effectiveness of the physical security plan, guard training plan or the first four categories of information (Background, Generic Planning

Base, Licensee Planning Base, and Responsibility Matrix) contained in the licensee safeguards contingency plan without prior approval of the Commission. A licensee desiring to make a change must submit an application for a license amendment pursuant to § 72.39.

(b) The licensee may, without prior Commission approval, make changes to the physical security plan, guard training plan, or the safeguards contingency plan, if the changes do not decrease the safeguards effectiveness of these plans. The licensee shall maintain records of changes to any such plan made without prior approval for a period of 3 years from the date of the change and shall furnish to the Regional Administrator of the appropriate NRC Regional Office specified in Appendix A of Part 73 of this Chapter, with a copy to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a description of each change within two months after the change is made.

Subpart I--Training and Certification of Personnel

§ 72.301 Operator requirements.

Operation of equipment and controls that have been identified as important to safety in the Safety Analysis Report and in the license must be limited to trained and certified personnel or be under the direct visual supervision of an individual with training and certification in the operation. Supervisory personnel who personally direct the operation of equipment and controls that are important to safety must also be certified in such operations.

§ 72.302 Operator training and certification program.

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI or MRS personnel. This program must be submitted to the Commission for approval with the license application.

§ 72.303 Physical requirements.

The physical condition and the general health of personnel certified for the operation of equipment and controls that are important to safety must not be such as might cause operational errors that could endanger other in-plant personnel or the public health and safety. Any condition that might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, if appropriate provisions are made to accommodate such defect.

Subpart J--Provision of MRS Information to State Governments
and Indian Tribes

§ 72.310 Provision of MRS information.

(a) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee shall provide to the Governor and legislature of any State in which a monitored retrievable storage facility authorized under section 141 of the Nuclear Waste Policy Act of 1982 is or may be located, and to the Chief Executive of the local municipality, and to the Governors of any contiguous States and to the governing body of any affected Indian tribe, timely and complete information regarding determinations or plans made by the Commission with respect to siting, development, design,

licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility.

(b) Notwithstanding paragraph (a) of this section, the Director or the Director's designee is not required to distribute any document to any entity if, with respect to such document, that entity or its counsel is included on a service list prepared pursuant to Part 2 of this chapter.

(c) Copies of all communications by the Director or the Director's designee under this section shall be placed in the Commission's Public Document Room and shall be furnished to DOE.

§ 72.312 Participation in license reviews.

State and local governments and affected Indian tribes may participate in license reviews as provided in Subpart G of Part 2 of this chapter.

§ 72.314 Notice to States.

If the Governor and legislature of a State have jointly designated on their behalf a single person or entity to receive notice and information from the Commission under this part, the Commission will provide such notice and information to the jointly designated person or entity instead of the Governor and the legislature separately.

§ 72.316 Representation.

Any person who acts under this subpart as a representative for a State (or for the Governor or legislature thereof) or for an affected Indian tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in such representative capacity.

Conforming Amendments

PART 2 - RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

2. The authority citation for Part 2 is revised to read as follows:
 Authority: Secs. 161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87-615, 76 Stat. 409 (42 U.S.C. 2241); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552.

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 105, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871). Sections 2.102, 2.103, 2.104, 2.105, 2.721 also issued under secs. 102, 103, 104, 105, 183, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Sections 2.200-2.206 also issued under secs. 186, 234, 68 Stat. 955, 83 Stat. 444, as amended (42 U.S.C. 2236, 2282); sec. 206, 88 Stat. 1246 (42 U.S.C. 5846). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 as amended (42 U.S.C. 4332). Sections 2.700a, 2.719 also issued under 5 U.S.C. 544. Sections 2.754, 2.760, 2.770 also issued under 5 U.S.C. 557. Section 2.764 and Table 1A of Appendix C also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.800 and 2.808 also issued under 5 U.S.C. 553.

Section 2.809 also issued under 5 U.S.C. 553 and sec. 29, Pub. L. 85-256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Appendix A also issued under sec. 6, Pub. L. 91-560, 84 Stat. 1473 (42 U.S.C. 2135). Appendix B also issued under sec. 10, Pub. L. 99-240, 99 Stat. 1859 (42 U.S.C. 2021j).

3. In § 2.104, paragraph (e) is revised to read as follows:

§ 2.104 Notice of hearing.

* * * * *

(e) The Secretary will give timely notice of the hearing to all parties and to other persons, if any, entitled by law to notice. The Secretary will transmit a notice of hearing on an application for a license for a production or utilization facility, for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, for a license under Part 61 of this chapter, for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter, and for a license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) to the governor or other appropriate official of the State and to the chief executive of the municipality in which the facility is to be located or the activity is to be conducted or, if the facility is not to be located or the activity conducted within a municipality, to the chief executive of the county (or to the Tribal organization, if it is to be so located or conducted

within an Indian reservation). The Secretary will transmit a notice of hearing on an application for a license under Part 72 of this chapter to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS) to the same persons who received the notice of docketing under § 72.11(e) of this chapter.

4. In § 2.105, paragraph (a) is amended by deleting the word "or" at the end of paragraph (6), by redesignating paragraphs (7), (8) and (9) as paragraphs (9), (10) and (11) and by adding new paragraphs (7) and (8) to read as follows:

§ 2.105 Notice of proposed action.

(a) * * *

* * * * *

(7) A license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) or to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS);

(8) An amendment to a license specified in paragraph (a)(7) of this section when such an amendment presents a genuine issue as to whether the health and safety of the public will be significantly affected; or

(9) * * *

(10) * * *

(11) * * *

* * * * *

5. In § 2.764, paragraph (c) is revised to read as follows:

§ 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.

* * * * *

(c) An initial decision directing the issuance of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) under 10 CFR Part 72 shall become effective only upon order of the Commission. The Director of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) under 10 CFR Part 72 until expressly authorized to do so by the Commission.

* * * * *

6. In Appendix C, Table 1A, is revised to read as follows:

Appendix C - General Statement of Policy and Procedure for NRC Enforcement Actions

* * * * *

Table 1A -- Base Civil Penalties

	Plant Operations, construc- tion, health physics and and EP	Safeguards	Transportation	
			Greater than Type A quantity ¹	Type A quantity or less ²
a. Power reactors	\$100,000	\$100,000	\$100,000	\$5,000
b. Test reactors	10,000	10,000	10,000	2,000
c. Research reactors and critical facilities	5,000	5,000	5,000	1,000
d. Fuel fabricators and industrial processors ³	25,000	100,000 ⁴	25,000	5,000
e. Mills and uranium conversion facilities	10,000	--	5,000	2,000
f. Industrial users of material ⁵	10,000	--	5,000	2,000
g. Waste disposal licensees	10,000	--	5,000	2,000
h. Academic or medical institutions ⁶	5,000	--	2,500	1,000
i. Independent spent fuel and monitored retrievable storage installations	25,000	100,000	25,000	5,000
j. Other material licensees	1,000	--	2,500	1,000

¹Includes irradiated fuel, high level waste, unirradiated fissile material and any other quantities requiring Type B packaging.

²Includes low specific activity waste (LSA), low level waste, Type A packages, and excepted quantities and articles.

³Large firms engaged in manufacturing (or distribution of byproduct, source, or special nuclear material).

⁴This amount refers to Category 1 licensees (or defined in 10 CFR 73.2(bb)). Licensed fuel fabricators not authorized to possess Category 1 material have a base penalty amount of \$50,000.

⁵Includes industrial radiographers, nuclear pharmacies, and other industrial users.

⁶This applies to nonprofit institutions not otherwise categorized under sections "a" through "g" in this table.

PART 19 - NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

7. The authority citation for Part 19 is revised to read as follows:

Authority: Secs. 53, 63, 81, 103, 104, 161, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2093, 2111, 2133, 2134, 2201, 2236, 2282); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841). Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 19.11(a), (c), (d), and (e) and 19.12 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 19.13 and 19.14(a) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

8. Section 19.2 is revised to read as follows:

§ 19.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed by the Nuclear Regulatory Commission pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

9. In § 19.3, paragraph (d) is revised to read as follows:

§ 19.3 Definitions.

* * * * *

(d) "License" means a license issued under the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including licenses to operate a production or utilization facility pursuant to Part 50 of this chapter. "Licensee" means the holder of such a license.

* * * * *

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

10. The authority citation for Part 20 is revised to read as follows:

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 68 Stat. 930, 933, 935, 936, 937, 948, as amended (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 20.408 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended, (42 U.S.C. 2273), §§ 20.101, 20.102, 20.103(a), (b), and (f), 20.104(a) and (b), 20.105(b), 20.106(a), 20.201, 20.202(a), 20.205, 20.207, 20.301, 20.303, 20.304, and 20.305 are issued under sec. 161b, 68 Stat. 948, as amended, (42 U.S.C. 2201(b)); and §§ 20.102, 20.103(e), 20.401-20.407, 20.408(b) and 20.409 are issued under sec. 161o, 68 Stat. 950, as amended, (42 U.S.C. 2201(o)).

11. Section 20.2 is revised to read as follows:

§ 20.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

12. In § 20.408, paragraph (a)(5) is revised to read as follows:

§ 20.408 Reports of personnel monitoring on termination of employment or work.

(a) This section applies to each person licensed by the Commission to:

* * * * *

(5) Possess spent fuel in an independent spent fuel storage installation (ISFSI) or possess spent fuel or high level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter; or

* * * * *

PART 21 - REPORTING OF DEFECTS AND NONCOMPLIANCE

13. The authority citation for Part 21 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 234, 83 Stat 444, as amended, (42 U.S.C. 2201, 2282); secs. 201, as amended, 206, 88 Stat 1242, as amended, 1246 (42 U.S.C. 5841, 5846).

Sec. 21.2 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 21.6, 21.21(a) and 21.31 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 21.21, 21.41 and 21.51 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

14. Section 21.2 is revised to read as follows:

§ 21.2 Scope.

The regulations in this part apply, except as specifically provided otherwise in Parts 31, 34, 35, 39, 40, 60, 61, 70, or 72 of this chapter, to each individual, partnership, corporation, or other entity licensed pursuant to the regulations in this chapter to possess, use, and/or transfer within the United States source material, byproduct material, special nuclear material, and/or spent fuel and high-level radioactive waste, or to construct, manufacture, possess, own, operate and/or transfer within the United States, any production or utilization facility, or independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS), and to each director [see § 21.3(f)] and responsible officer [see § 21.3(j)] of such a licensee. The regulations in this part apply also to each individual, corporation, partnership or other entity doing business within the United States, and each director and responsible officer of such organization, that constructs [see § 21.3(c)] a production or utilization facility licensed for manufacture, construction or operation [see § 21.3(h)] pursuant to Part 50 of this chapter, an independent spent fuel storage installation (ISFSI) for the storage of spent fuel licensed pursuant to

Part 72 of this chapter or a monitored retrievable storage installation (MRS) for the storage of spent fuel or high-level radioactive waste licensed pursuant to Part 72 of this chapter, or supplies [see § 21.3(1)] basic components [see § 21.3(a)] for a facility or activity licensed, other than for export, under Parts 30, 39, 40, 50, 60, 61, 70, 71, or 72 of this chapter. Nothing in these regulations should be deemed to preclude either an individual or a manufacturer/supplier of a commercial grade item [see § 21.3(a-1)] not subject to the regulations in this part from reporting to the Commission a known or suspected defect or failure to comply and, as authorized by law, the identity of anyone so reporting will be withheld from disclosure.¹

PART 51 - ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC
LICENSING AND RELATED REGULATORY FUNCTIONS

15. The authority citation for Part 51 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended (42 U.S.C. 2201); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

¹NRC Regional Offices will accept collect telephone calls from individuals who wish to speak to NRC representatives concerning nuclear safety-related problems. The location and telephone numbers (for nights and holidays as well as regular hours) are listed below:

Region:

I	(Philadelphia)	(215) 337-5000
II	(Atlanta)	(404) 331-4503
III	(Chicago)	(312) 790-5500
IV	(Dallas)	(817) 860-8100
IV	Uranium Recovery Field Office (Denver). .	(303) 236-2805
V	(San Francisco)	(415) 943-3700

Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041. Sections 51.20, 51.30, 51.60, 51.61, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100-203, ___ Stat. ___ (42 U.S.C. 10155, 10161). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021).

16. In § 51.20, paragraphs (b)(9) and (b)(10) are revised to read as follows:

§ 51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements.

* * * * *

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

* * * * *

(9) Issuance of a license pursuant to Part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor, or for the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS).

(10) Issuance of a license amendment authorizing the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

17. In § 51.30, a new paragraph (c), is added to read as follows:
 § 51.30 Environmental assessment.

* * * * *

(c) An environmental assessment for a proposed action regarding a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the Nuclear Waste Policy Act of 1982 (96 Stat. 2242).

18. In § 51.60, paragraphs (a), (b)(1)(iii) and (b)(4) are revised to read as follows:

§ 51.60 Environmental report - Materials licenses.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to Parts 30, 32, 33, 34, 35, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1)-(b)(6) of this section, shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report" or "Supplement to Applicant's Environmental Report," as appropriate. The "Applicant's Environmental Report" shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted

to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

(b) * * *

(1) * * *

* * * * *

(iii) Storage of spent fuel in an independent spent fuel storage installation (ISFSI) or the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

(4) Amendment of a license to authorize the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

19. Section 51.61 is revised to read as follows:

§ 51.61 Environmental report - Independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter shall submit with its application to the Director of Nuclear

Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report - ISFSI License" or "Applicant's Environmental Report - MRS License," as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in Subpart E of Part 72 of this chapter. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), no discussion of the environmental impact of the storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required in an environmental report submitted by an applicant for an initial license for storage of spent fuel in an ISFSI, or any amendment thereto.

20. In § 51.80, paragraph (b) is revised to read as follows:

§ 51.80 Draft environmental impact statement - Material license.

* * * * *

(b)(1) Independent spent fuel storage installation (ISFSI). Unless otherwise determined by the Commission and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a draft environmental impact statement on the issuance of an initial license for storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel only for the term of the license or amendment applied for.

(2) Monitored retrievable storage installation (MRS). As provided in sections 141(c), (d), and (e) and 148(a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPAA) (96 Stat. 2242, 2243); ___ Stat. ___ a draft environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

21. In § 51.97, a new paragraph (b) is added to read as follows:
 § 51.97 Final environmental impact statement - Material license.

* * * * *

(b) Monitored retrievable storage facility (MRS). As provided in sections 141(c), (d), and (e) and 148(a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPAA) (96 Stat. 2242, 2243); ___ Stat. ___) a final environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

PART 70 - DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

22. The authority citation for Part 70 is revised to read as follows:

Authority: Sections 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073,

2201, 2232, 2233, 2282); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 70.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.62 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 70.3, 70.19(c), 70.21(c), 70.22(a), (b), (d)-(k), 70.24 (a) and (b), 70.32 (a)(3), (5) and (6), (d), and (i), 70.36, 70.39 (b) and (c), 70.41(a), 70.42(a) and (c), 70.56, 70.57 (b), (c), and (d), 70.58 (a)-(g)(3), and (h)-(j) are issued under sec. 161b, 68 Stat. 948 as amended (42 U.S.C. 2201(b)); §§ 70.7, 70.20a (a) and (d), 70.20b (c) and (e), 70.21(c), 70.24(b), 70.32(a)(6), (c), (d), (e), and (g), 70.36, 70.51(c)-(g), 70.56, 70.57(b) and (d), 70.58 (a)-(g)(3) and (h)-(j) are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 70.20b (d) and (e), 70.38, 70.51(b) and (i), 70.52, 70.53, 70.54, 70.55, 70.58(g)(4), (k) and (l), 70.59, and 70.60(b) and (c) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

23. In § 70.1, paragraph (c) is revised to read as follows:

§ 70.1 Purpose.

* * * * *

(c) The regulations in Part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess (1) spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI), or (2) spent fuel, high-level radioactive waste, and other radioactive materials associated with the storage in a monitored retrievable storage installation (MRS), and the terms and conditions under which the Commission will issue such licenses.

24. In § 70.20a, paragraph (b) is revised to read as follows:

§ 70.20a General license to possess special nuclear material for transport.

* * * * *

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to Parts 30 through 35, 39, 40, 50, 72, 110, or other sections of this part.

* * * * *

PART 73 - PHYSICAL PROTECTION OF PLANTS AND MATERIALS

25. The authority citation for Part 73 is revised to read as follows:

Authority: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); secs. 201, as amended, 204, 88 Stat. 1242, as amended, 1245 (42 U.S.C. 5841, 5844).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Sec. 73.37(f) also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876 (42 U.S.C. 2169).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), §§ 73.21, 73.37(g) and 73.55 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 73.20, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, 73.57, and 73.67 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 73.20(c)(1), 73.24(b)(1), 73.26(b)(3), (h)(6), and (k)(4), 73.27(a) and (b), 73.37(f), 73.40(b) and (d), 73.46(g)(6) and (h)(2), 73.50(g)(2), (3)(iii)(B) and (h), 73.55(h)(2), and (4)(iii)(B), 73.57, 73.70, 73.71 and 73.72 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

26. In § 73.1, paragraph (b)(6) is revised to read as follows:

§ 73.1 Purpose and scope.

* * * * *

(b) * * *

* * * * *

(6) This part prescribes requirements for the physical protection of spent fuel stored in either an independent spent fuel storage

installation (ISFSI) or a monitored retrievable storage installation (MRS) licensed under Part 72 of this chapter.

* * * * *

PART 75 - SAFEGUARDS ON NUCLEAR MATERIAL - IMPLEMENTATION OF US/IAEA AGREEMENT

27. The authority citation for Part 75 is revised to read as follows:

Authority: Secs. 53, 63, 103, 104, 122, 161, 68 Stat. 930, 932, 936, 937, 939, 948, as amended (42 U.S.C. 2073, 2093, 2133, 2134, 2152, 2201); sec. 201, as amended, 88 Stat. 1242; as amended (42 U.S.C. 5841).

Section 75.4 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), the provisions of this part are issued under sec. 1610, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

28. In § 75.4, paragraph (k)(4) is revised to read as follows:
§ 75.4 Definitions.

As used in this part:

* * * * *

(k) "Installation" means:

* * * * *

(4) An independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) as defined in § 72.3 of this chapter; or

* * * * *

PART 150 - EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY
IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER
SECTION 274

29. The authority citation for Part 150 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 274, 73 Stat. 688, as amended (42 U.S.C. 2201, 2021); sec. 201, as amended, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Sections 150.3, 150.15, 150.15a 150.31, 150.32 also issued under secs. 11e(2), 81, 68 Stat. 923, 935, as amended, secs. 83, 84, 92 Stat. 3033, 3039 (42 U.S.C. 2014e(2), 2111, 2113, 2114). Section 150.14 also issued under sec. 53, 68 Stat. 930, as amended (42 U.S.C. 2073). Section 150.15 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 150.30 also issued under sec. 234, 83 Stat. 444 (42 U.S.C. 2282).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 150.20(b)(2)-(4) and 150.21 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); § 150.14 is issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 150.16-150.19 and 150.20(b)(1) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

30. In § 150.15, paragraph (a)(7) is revised to read as follows:

§ 150.15 Persons not exempt.

(a) * * *

* * * * *

(7) The storage of (i) spent fuel in an independent spent fuel storage installation (ISFSI) or (ii) spent fuel and high level radioactive waste in a monitored retrievable storage installation (MRS) licensed pursuant to Part 72 of this chapter.

* * * * *

Dated at Washington, DC, this ____ day of _____, 1988.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,
Secretary of the Commission.

JUNE 8, 1988

C O R R E C T I O N N O T I C E

TO ALL HOLDERS OF

SECY-87-298 - FINAL RULE FOR REVISION TO 10 CFR PART 72 ENTITLED,
"LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT
NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE," AND CONFORMING
AMENDMENTS TO 10 CFR PARTS 2, 19, 20, 21, 51, 70, 73, 75, AND
150

(COMMISSION ACTION ITEM)

THE OFFICE OF THE GENERAL COUNSEL HAS PROVIDED THE ATTACHED ENCLOSURES 1 AND 5 TO SECY-87-298 WHICH SHOULD BE USED TO REPLACE THE CORRESPONDING ENCLOSURES PREVIOUSLY PROVIDED. THE REVISIONS IN THE ATTACHED FRN AND REGULATORY ANALYSIS WERE MADE IN RESPONSE TO THE DECEMBER 22, 1987, ENACTMENT OF THE NUCLEAR WASTE POLICY AMENDMENTS ACT OF 1988 (P.L. 100-203), OMNIBUS BUDGET RECONCILIATION ACT FOR FISCAL YEAR 1988, TITLE V, SUBTITLE A.), AND TO CONCERNS RAISED BY COMMISSIONER ASSISTANTS AT A MEETING WITH THE NRC STAFF HELD MAY 24, 1988. THE FRN INCORPORATES THE DECOMMISSIONING AMENDMENTS APPROVED BY THE COMMISSION ON MAY 12, 1988. IN ORDER TO PROVIDE SUFFICIENT SPACE TO ACCOMMODATE POSSIBLE FUTURE AMENDMENTS TO PART 72, THE SECTIONS OF THE FINAL RULE HAVE BEEN RENUMBERED. ACCURATE CITATIONS TO RELEVANT SECTIONS OF THAT ACT WILL BE ADDED AS SOON AS THE SLIP LAW TEXT OF P.L. 100-203 BECOMES AVAILABLE.

COMMISSIONERS ARE REQUESTED TO VOTE BY FRIDAY, JUNE 24, 1988.

ATTACHMENTS
AS STATED

THE SECRETARIAT

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 2, 19, 20, 21, 51, 70, 72, 73, 75 and 150

Licensing Requirements for the Independent Storage of Spent
Nuclear Fuel and High-Level Radioactive Waste

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Waste Policy Act of 1982, as amended (NWPAA) requires that monitored retrievable storage facilities (MRS) for spent nuclear fuel and high-level radioactive waste (HLW) be subject to licensing by the Nuclear Regulatory Commission (NRC). The NRC is adding language to its regulations in 10 CFR Part 72 to provide for licensing the storage of spent nuclear fuel and HLW in an MRS. The Commission intends to have the appropriate regulation to fulfill the requirements of the NWPAA in place in a timely manner. The rule would also clarify certain issues that have arisen since Part 72 was made effective on November 28, 1980 and incorporate other changes resulting from public comments received.

EFFECTIVE DATE: [30 days following publication in the Federal Register].

ADDRESSES: Copies of NUREG-0575, NUREG-1092, and NUREG-1140 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also

available from the National Technical Information Service, 5282 Port Royal Road, Springfield, VA 22161. A copy of each NUREG is also available for public inspection and/or copying at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Keith G. Steyer or C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301)492-3824 or 492-3834, respectively.

SUPPLEMENTARY INFORMATION:

On May 27, 1986, following Commission approval, the proposed revision to 10 CFR Part 72 relating to MRS licensing was published in the Federal Register (51 FR 19106) for comment. The comment period expired on August 25, 1986.

The NRC received 195 comment letters from utilities, engineering companies, State offices, environmental groups, private citizens, and a member of the U.S. House of Representatives. The comment letters from private citizens numbered about 145. (Some of these were signed by several individuals or were submitted on behalf of private business firms.) From the comment letters received, the staff identified 27 separate topics to which specific responses were directed. Comments were also received which addressed the original rule, not the proposed amendment. In response to the comments, several changes have been made to the proposed rule. The majority of these changes are mainly clarifying in nature.

In order to provide sufficient space to accommodate possible future amendments to Part 72, the sections of the final rule have been renumbered. To aid the reader in following the discussion of comments in the preamble of the final rule, each reference to a specific section of the final rule is followed by a bracketed reference to the parallel section of the proposed rule.

A compilation of the issues raised as a result of public comment and the accompanying Commission response follow:

1. Backfitting

Comment:

Several commenters indicated that the proposed rule should incorporate the sense of the reactor backfitting rule set out in 10 CFR 50.109.

Response:

Although these storage facilities are not like reactors but are, for the most part, static by nature with very little need for design changes, the staff has revised the backfitting requirements of 10 CFR 72.62 [§ 72.42]. The change is being made to conform § 72.62 [§ 72.42] more closely to § 50.109 as modified by the court decision in Union of Concerned Scientists, et al., v. U.S. Nuclear Regulatory Commission, et al., Nos. 85-1757 and 86-1219 (U.S.C.A.D.C. August 4, 1987).

2. Opportunity for Hearing Prior to the First Receipt of Spent Fuel or High-Level Radioactive Waste (HLW).

Comment:

A new proposed § 72.46(c) [§72.34(c)] was added to 10 CFR Part 72 specifically providing that the Commission may, upon its own initiative, issue a notice of opportunity for hearing prior to the first receipt of spent fuel or high-level radioactive waste at an MRS if it finds this to be in the public interest. In the supplementary information in the May 27, 1986 Proposed Rule, the Commission indicated its own considerations on this topic and expressed particular interest in receiving public comment on (1) the need to make a finding before MRS operation that construction conforms to the license application, (2) provisions for second stage hearing rights to address specific new issues which could not have been litigated at the first stage and/or new information which has been revealed since issuance of the license, and (3) the format of the hearing, if held. Of the comment letters that addressed these points, some expressed no preference, some favored the provisions, some thought the provisions were unnecessary.

The principal reasons given by proponents of these provisions are that the public will have more confidence that the MRS will be operated safely and that there should be a clear opportunity to examine new issues which could be raised. Other comments of proponents were that the Department of Energy has had poor public performance in the past, that the degree of hazard is similar to nuclear power reactors which require a two-stage process,

and that the opportunity for a second hearing could be an appropriate time to examine technical/financial information. Additional comments suggested that the rule require a second mandatory hearing and that funding be provided for nonprofit groups to participate in a second hearing.

On the topic of a finding it was suggested that (1) criteria be set forth for any finding the Commission may make, and (2) the NRC inspections should certify quality assurance and completeness of construction in an inspection report prior to initiation of operation. One comment suggested that start-up of the MRS should be linked to the repository authorization as an issue at a second hearing.

The principal reasons given by those opposed to the new provisions for a second hearing were that (1) it would cause unnecessary delay, (2) the Commission's regulations in 10 CFR Part 2 were sufficient to examine any new issues, (3) the NRC's normal systematic inspections are adequate to assure that construction was proper, (4) the nature of the MRS is such that all issues could be covered by the opportunity for public review prior to issuing a license and starting construction, and (5) the back-fitting provision (§ 72.62 [§ 72.42]) provides additional assurance that significant issues may be raised by staff after the license is issued. Other reasons offered in objection to the new provisions were that (6) there was no basic difference

between an MRS and an Independent Spent Fuel Storage Installation (ISFSI), (7) the small amount of solidified high-level waste which could be received could not justify any change in procedure from an ISFSI, and (8) the Safety Analysis Report (SAR) update procedure will assure that any new issue will be known and understood by NRC staff.

Response:

The Commission specifically added the new provision and requested comments in order to obtain as complete an understanding as possible of whether or not any benefits would accrue to the public from such a procedure. This was done with full knowledge that the Atomic Energy Act of 1954, as amended, only requires one hearing and that under the procedures in 10 CFR Part 2 the opportunity always exists for any member of the public to bring any new issues to the Commission's attention.

In the comments received from the public there was no indication that there were likely to be any new safety issues brought forward which could not have been fully addressed on the occasion of the hearing held prior to issuance of the license. The licensing process of Part 72 supports one-stage licensing as it requires that all information needed for the licensing action be available and complete before a license is issued, i.e., final design, quality assurance/control procedures, operator training procedures, operating technical specifications, etc. Unlike a reactor license where a construction permit is issued

prior to final design, an MRS application for license contains a final and complete design and therefore one-stage licensing is achievable. As to conformance of construction with the application and license, the Commission believes that, unlike reactors, construction of Part 72 type facilities will be simple and straightforward. Accordingly, in the Commission's judgment, there will be no need, as part of the safety review prior to license issuance, to require an applicant to "prove" conformance of the as-built facility with the application. NRC would audit construction progress and, in the event some problems were found, enforcement action could be taken to correct them and, if necessary, halt the receipt of spent fuel until they were corrected. In this regard, § 72.82(c)(3) [§ 72.56(c)(3)] provides for establishing an NRC resident inspection program if warranted.

3. Interaction with States

Comment:

Comments were received concerning providing of information to State and local governments and their interaction in the licensing process with DOE and the Commission.

Response:

Under § 72.200 [§ 72.310] of the proposed rule, the Governor and legislature of any State in which a monitored retrievable storage installation may be located and the governing body of any affected Indian tribe will be provided timely and complete

information regarding determinations or plans made by the Commission with respect to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility. In response to the comment, the Commission will change § 72.200 [§ 72.310] "Provision of MRS Information" to require that the above information will also be provided to each affected unit of local government and to the Governors of any contiguous States. The definition of "affected unit of local government" which has been added to § 72.3 tracks the definition used in the Nuclear Waste Policy Amendments Act of 1987. (Citation to be provided.) Participation by persons, including States, in license reviews is as provided for in 10 CFR Part 2, Subpart G.

4. High Burn-Up Fuel

Comment:

In response to a 1980 petition for rulemaking, the Commission agreed (51 FR 23233, June 26, 1986) to prepare an environmental assessment on high burn-up fuel. The Commission's response concerning impacts of high burn-up fuel should be provided.

Response:

The Commission issued an environmental assessment addressing the subject of high burn-up fuel in February 1988 "Assessment

of the Use of Extended Burnup Fuel in Light Water Power Reactors" (NUREG/CR-5009). The assessment concluded "Environmentally, this burnup increase would have no significant impact over normal burnup."

5. Emergency Planning

Comment:

As discussed in supplementary information to the proposed revisions to 10 CFR Part 72 the rule was rewritten to set forth explicit requirements appropriate to an ISFSI or an MRS, rather than refer to Appendix E to 10 CFR Part 50, which is specific to nuclear power reactors. Responders commented on this change. Several thought that there should be a wider dissemination of the emergency plan which an applicant would have to prepare pursuant to the rewritten § 72.32 [§ 72.19], as well as a comment period longer than the specified 60 days. Another responder thought that 60 days was adequate. Other comments were that (1) sabotage of casks and terrorism, sabotage and military attack scenarios should be considered in an emergency plan, (2) a fully developed and tested offsite emergency plan should be developed, (3) the new version of § 72.32 [§ 72.19] implies a need for offsite protective actions which is incorrect, (4) the supplementary information which will accompany the issuance of the final rule should discuss worldwide experience and previous reviews and studies as support for the new emergency planning provisions, and (5) the emergency plan should continue to be the same as that for nuclear power reactors.

Response:

The basic concept of emergency planning in § 72.32 [§ 72.19] has not been changed. None of the respondents provided any additional information to the staff or questioned the staff analyses such as to change the basis for the staff's approach to emergency planning for an ISFSI or an MRS. Moreover, in view of the relatively passive nature of facilities for the receipt, handling and storage of spent fuel and high-level radioactive waste, as compared to operating power reactors, emergency plans for ISFSI and MRS need not be equivalent to emergency plans for reactors.

Since the proposed revision of Part 72 was published for comment on May 27, 1986, the NRC has published proposed amendments to 10 CFR Parts 30, 40, and 70¹ which would require certain NRC fuel cycle and other radioactive materials licensees that engage in activities that may have the potential for a significant accidental release of NRC-licensed materials to establish and maintain approved emergency plans for responding to such accidents. Although applicable to persons licensed under different parts of the Commission's regulations, the proposed requirements for emergency plans in Parts 30, 40, and 70 contain substantially identical provisions because they are designed to protect the public against similar radiological hazards. The proposed revision of Part 72 as published for

¹Proposed rule on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees, 52 FR 12921, April 20, 1987.

comment also requires applicants for an ISFSI or MRS license to submit an emergency plan (see § 72.32 [§ 72.19].) Although the texts of proposed § 72.19 (redesignated § 72.32) and the parallel provisions of the proposed Emergency Preparedness rule are not identical, these provisions have the same purpose and use the same approach. In both cases, the proposed regulations require onsite emergency planning with provisions for offsite emergency response in terms of coordination and communication with offsite authorities and the public. It is therefore appropriate that in both cases these requirements should be expressed in the same way.

Until the Commission promulgates the Emergency Preparedness rule in final form, it is not possible to ascertain exactly the language that should be used. In view of these circumstances and since there is every expectation that this period of uncertainty will be of relatively short duration, we believe the prudent course of action is to reserve § 72.32 [§ 72.19], Emergency plan, in the final rule with the understanding that the text of this section will be promulgated in final form as a conforming amendment when the Commission adopts and promulgates the final Emergency Preparedness rule or shortly thereafter. We should point out that the temporary absence from Part 72 of requirements respecting emergency plans does not present any difficulties from a regulatory standpoint. To date, only three licenses have been issued under Part 72. Two licensees also hold

Part 50 licenses and are required to comply with the provisions respecting emergency plans set out in that Part. The Part 72 license held by the third licensee contains conditions relating to emergency planning with which that licensee must comply.

Sabotage, terrorism, and military attacks are not treated as emergency preparedness issues. The Commission's established practice with respect to dangers of enemy action is that the protection of the United States against hostile enemy acts is a responsibility of the nation's defense establishment and the various agencies having internal security functions. Acts other than military are covered under a planning system included in Subpart H of Part 72, which contains requirements respecting physical security and safeguards contingency plans that are specifically designed to preclude the occurrence of such acts. The primary purpose of an emergency response plan is to prescribe measures to be taken to mitigate the effects of accidental releases of radioactivity, irrespective of their cause. Thus, in the unlikely event that there should be an accidental release of radioactivity by reason of an act of terrorism or an act of sabotage, protective actions would be taken as prescribed in the emergency response plan, just as they would be taken in the case of accidental release arriving from other causes.

6. Department of Energy as Licensee for the MRS

Comment:

Respondents commented on several aspects of the licensing of the Department of Energy for the MRS. One commenter requested that in every instance in which there would be a difference in requirement between the Department and other licensees, that that difference should be specifically defined in Part 72. Other commenters pointed out that the funding for the MRS was from the Nuclear Waste Fund as stipulated in the NWPA and, therefore, the Department should be required, through Part 72, to show how these funds will be adequate for operation and decommissioning. A further commenter questioned the Department's authority pursuant both to Part 72 and its own orders to delegate quality assurance program responsibilities to its contractor(s). One commenter suggested that Part 72 should permit revocation or suspension of the Department's license for the MRS since the NRC could not impose civil penalties for license violations.

Response:

As discussed in the supplementary information to the proposed revisions to Part 72, the Department of Energy is exempted from certain financial reports, creditor information and financial plans for decommissioning. As pointed out in the comment above, funding for the MRS will be from the Nuclear Waste Fund, separately accountable from public funds. Consistent with the principle of full cost recovery in Section 302 of the NWPA

(42 U.S.C. 10222) this fund will provide all financial resources for the MRS, i.e., licensing, construction, operation and decommissioning. Since DOE is a federal agency and the status of the NWPA waste fund is reported to and reviewed by the Congress yearly, the Commission believes that Congress will assure that adequate funds are available and appropriated for DOE to carry out its statutory responsibility. Under these circumstances additional NRC oversight is unnecessary and inappropriate.

As to possible conflicts in the licensing and regulatory process between orders and procedures of the Department of Energy and NRC requirements, two government agencies, the commenter provided no specifics and the Commission is not aware of any such conflict. The Department will be provided the same latitude as any other licensee pursuant to § 72.142 [§ 72.101] wherein it is stated that "the licensee may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program."

The Energy Reorganization Act of 1974, as amended, and the Nuclear Waste Policy Act of 1982, as amended, provide that upon authorization by Congress an MRS shall be subject to licensing by the Commission. Accordingly, no exemptions from the provisions of § 72.60 [§ 72.41], "Modification, revocation, and suspension of licenses" and § 72.84 [§ 72.57], "Violation" are shown for the Department. In the exercise of this broad

statutory authority and consistent with its customary practice in regulating other Federal licensees, the Commission may impose penalties on the Department if there is sufficient justification. The Commission knows of no other differences between the Department and other licensees for which a change in Part 72 is warranted. (The commenters recommended no specific changes in this area.)

7. Minimum Decay Period (Age) for Receipt of Spent Fuel

Comment:

It was noted that there is a seeming discrepancy between the minimum decay period (age) of spent fuel as specified in § 72.2 (one year) and a reference to the environmental analysis in NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" (five-year decay assumed).

Response:

The minimum one-year decay period in § 72.2 is based on assuming the decay of radioisotopes having half-lives on the order of a few days or less. In actuality, the decay periods are likely to be much longer than one year. Accordingly, the NUREG-1140 analyses were based on the more realistic, but still conservative, assumption that five or more years of decay would have taken place for the spent fuel for which an accident in a dry cask was assumed. This is not a discrepancy since different purposes are being served in each instance. In choosing a

nominal decay period of 10 years and a five-year minimum decay period in the design parameters for the MRS the Department of Energy (DOE) is merely exercising its own prerogative to use a longer decay criterion for purposes of fuel receipt. Selection of a five-year minimum decay period also reflects DOE's understanding that the spent fuel to be received at the MRS will already have decayed for periods of time likely to be even much greater than five years at individual power reactor sites. The original analysis for Part 72 was based on one-year decay.

8. Physical Security Plan

Comment:

A few commenters were concerned about the proposed change in the requirements of the physical security plan for the Department of Energy in that the Department must provide a certification that it will provide at the MRS "such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security." The concerns were that this was an added requirement imposed only on the Department and that there was no definition of what a "comparable" DOE facility would consist of.

Response:

For all licensees physical security plans are designed for two purposes: (1) to protect against sabotage and (2) to promote the common defense and security. The change in the requirements of the physical security plan is intended to be consistent with

10 CFR Part 60, "Disposal of High-Level Radioactive Wastes in Geologic Repositories," wherein it is recognized that the Department already carries these responsibilities for all of its facilities.

The Department in carrying out its responsibility to promote the common defense and security of all its facilities can best identify the surface DOE facilities to which the MRS is most comparable for purposes of physical security without the unnecessary burden of an NRC definition of "Comparable." Comparability in this context is a function of the kinds and quantities of nuclear materials held at the facilities and the potential consequences of theft or sabotage. However, the NRC staff believes that the Receiving Basin for Off-Site Fuel at the Savannah River Plant may be an appropriately comparable facility.

9. Continuous Cask Monitoring Provision

Comment:

Several commenters pointed out that the wording of the provision in § 72.122(h)(4) [§ 72.92(h)(4)] for monitoring of storage confinement systems was inconsistent with Section 141(b)(1)(B) of the NWSA wherein it is required that an MRS facility shall be designed to permit continuous monitoring. Another commenter suggested that the State should participate in the monitoring.

Response:

The difference in wording between Section 141(b)(1)(B) of the NWPA and § 72.122(h)(4) [§ 72.92(h)(4)] was inadvertent. The staff has corrected the wording of § 72.122(h)(4) [§ 72.92(h)(4)] in the final rule to agree with the NWPA. As to State participation in monitoring, this is a matter to be resolved with the Department or as indicated in Response Number 3.

10. Inspection and/or Monitoring**Comment:**

In § 72.44(c)(3) [§ 72.33(c)(3)] the words "inspection and monitoring" have been changed to "inspection or monitoring."

Response:

The proposed change serves no useful purpose. The degree and method of inspection and monitoring will be dependent upon design and operational limits for specific cases. The words "inspection and monitoring" will be reinstated.

11. Foreign Fuel**Comment:**

One commenter expressed objection to the processing and storage of foreign spent fuel or HLW at the MRS and stated that it should be specifically prohibited.

Response:

The reference to foreign fuel in § 72.78 [§ 72.54] of the proposed rule was limited to material transfer report requirements and was not intended either to restrict or to permit such processing or storage. Section 302(a) of the NWPA does specify only "high-level radioactive waste, or spent nuclear fuel of domestic origin" and therefore the reference to foreign fuel at an MRS will be removed.

12. Tornado Missile**Comment:**

Commenters have disagreed with the deletion of the exemption regarding protection against tornado missile impact, that is, as expressed in the existing rule, "...An ISFSI need not be protected from tornado missiles...". Another commenter who favors the deletion concerning protection from tornado missiles would also have the restriction limiting its scope to "...structures, systems, and components important to safety" deleted.

Response:

The explanation of the exemption for tornado missiles, set out in the preamble of the existing rule (45 FR 74693, November 12, 1980) states that radionuclide releases from spent fuel which has undergone at least a year of radioactive decay would not be significant in the event of tornado missile impact, citing an accident evaluation from NUREG-0575 "Generic Environmental

Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuels" with gaseous radionuclide releases from water pool storage. With the continuing development of dry storage technologies, which include metal casks, concrete silos, dry wells, and air-cooled vaults, the Commission decided the designs should take into account tornado missile protection, unless it is shown that tornado missiles will not have any effect on structures, systems and components important to safety. While offsite gaseous release impacts from fuel rod rupture due to a tornado missile incident would remain insignificant, it is important to assure that design criteria for dry storage designs continue to address maintaining confinement of particulate material. All safety reviews for storage licensed under Part 72, both water pool and dry storage, have evaluated designs with respect to tornado missile impact. Since safety considerations drive the concern with respect to the tornado missile phenomenon, it is not necessary to expand that concern beyond "structures, systems, and components important to safety."

13. Use of Part 50 Criteria

Comment:

To expedite the licensing process for facilities proposed on sites which currently possess a 10 CFR Part 50 license, it was proposed that the applicable siting evaluation factors and general design criteria which have been reviewed and approved by the NRC for the Part 50 license be directly adopted for the

Part 72 facility without additional review, hearings or approvals. Adequate reviews and approvals have been completed, and any change to those previously approved should be treated as a backfit.

Response:

The storage of an increased amount of spent fuel on a reactor site, over that covered under an existing Part 50 license, requires staff action through safety and environmental reviews. In taking this action to authorize additional storage capacity for spent fuel, the staff will apply criteria from Part 50 or Part 72, depending on the type of licensing action being sought. Licensing action for an ISFSI would use criteria contained in Part 72 and Part 50 would be used for amending an existing reactor license. Storage of spent fuel on a reactor site outside of an existing reactor basin is already regulated under the criteria of Part 72 and these criteria have been used in reviewing applications for additional fuel storage at reactor sites.

14. Cladding

Comment:

Opposition is expressed to any lowering of fuel cladding protection, as provided for in the existing § 72.122(h)(1) [§ 72.92(h)(1)].

Response:

The revision of this provision (i.e., § 72.122(h)(1) [§ 72.92(h)(1)]) addressed confinement of fuel material, which is the purpose of protecting the fuel cladding. The revised provision specifically provides for additional alternative means of accomplishing this objective. This serves to enhance confinement protection capability rather than diminish it.

15. Rod Consolidation**Comment:**

Comments were received concerning the Department of Energy's plan to consolidate rods from spent fuel assemblies into sealed packages. One commenter suggested inserting the word "chemically" after the word "separated" in the definition of spent nuclear fuel. Another comment suggested that a separate environmental impact statement be prepared on rod consolidation. It was suggested that the NRC give rod consolidation special consideration and that it is not clear at present what requirements the NRC will use for rod consolidation.

Response:

Rod consolidation is the most elaborate operation contemplated for the MRS. The Department of Energy in its proposal and elsewhere has indicated its intention to fully develop the rod consolidation process for installation and operation. The rod consolidation system must meet all applicable portions of the

general design criteria. There is no precedent for the preparation of an environmental impact statement in connection with a single system of a facility for which a complete environmental impact statement will be prepared. The aspect of rod consolidation will be covered in that statement, as well as in the safety review and evaluation by the staff in connection with the application for an MRS. The NRC does expect to be kept informed by the Department of its developmental activities prior to receipt of an application.

The insertion of the word "chemically" as suggested has been accepted by the staff for the final rule.

16. Accident Analysis For Two Barriers

Comment:

A comment was received regarding engineered barriers such as canisters, "...the design basis accident scenario (i.e., release of gap activity from all fuel contained in a dry cask) should be revised to account for cases in which canister or other engineered barriers are incorporated."

Response:

Most cask designs do not incorporate canistering of spent fuel assemblies. Therefore, for purposes of this rulemaking, choice of a lesser accident scenario assuming canistering is not appropriate for a bounding analysis. In a safety review involving a

specific design, which incorporates an additional engineered barrier, the design basis accident scenario should, of course, consider this addition in the review analysis.

17. Records

Comment:

Comments were received concerning archiving of records; by whom and how long?

Response:

The proposed rule is consistent with current NRC policy concerning retention periods for records. The specific details of their physical storage is action taken at time of licensing.

18. Operator Safety

Comment:

Comments were received concerning design for ALARA.

Response:

The licensee is responsible for meeting the requirements of 10 CFR Part 20 "Standards for Protection Against Radiation," and all its provisions for maintaining ALARA. In addition § 72.24 [§ 72.15] Contents of Application: Technical Information requires applicants for a license to supply information for maintaining ALARA for occupational exposure.

19. MRS collocation with Waste Repository

Comment:

Commenter suggested expanding limitation for collocation with repository to include other facilities.

Response:

The collocation restrictions in § 72.96 [§ 72.75] are specifically included in order to comply with Sections 141(g) and 145(g) of the NHPA (42 U.S.C. 10161(g)) (See also Section 135(a)(2).)

20. MRS collocation with other nuclear facilities

Comment:

Commenter was concerned about other nuclear facilities that are not licensed.

Response:

The licensing process considers all activities and facilities, licensed or unlicensed, that could increase the probability or consequences of safety significant events at licensed facilities.

21. Definition of High-Level Radioactive Waste

Comment:

Some commenters noted that the definition of "high-level radioactive waste" used in Part 72 was not the same as the definition used in 10 CFR Part 60 and expressed the view that the two definitions should be consistent.

Response:

Since it was first promulgated in November 1980 for the purpose of establishing licensing requirements for the storage of spent fuel in an independent spent fuel storage installation, Part 72, unlike Part 60, has always contained a separate definition of spent fuel. In revising Part 72 to provide for licensing the storage of spent fuel and high-level radioactive waste in an MRS, the Commission has revised the definition of spent fuel to conform more closely to the definition set out in Section 2(23) of the Nuclear Waste Policy Act of 1982, as amended. The Commission has also amended § 72.3 by adding a definition of "high-level radioactive waste" which conforms to the language used in Section 2(12) of that Act. The definitions of spent fuel and high-level radioactive waste used in Part 72, though not identical to the definition of high-level radioactive waste used in 10 CFR Part 60 which encompasses "irradiated reactor fuel," are not inconsistent with that definition. It should be noted, however, that as explained in the Commission's advance notice of proposed rulemaking relating to the definition of high-level radioactive waste (52 FR 5992, February 27, 1987), the definition of high-level radioactive waste used in Part 60 serves a jurisdictional function, specifically identification of the class of Department of Energy facilities that, under Section 202 of the Energy Reorganization Act of 1974, 42 U.S.C. § 5842, are subject to the licensing and related regulatory authority of the Commission.

22. High Level Liquid Waste

Comment

Several commenters were concerned about the storage of liquid High-Level Waste (HLW).

Response:

The MRS will be designed and licensed for the storage of irradiated fuel and solidified waste from the processing of fuel.

The MRS will not receive liquid HLW and the form of the solid waste stored will be that which is compatible with the requirements for permanent disposal in a repository.

Any liquid wastes generated at the MRS will be handled in accordance with existing regulations.

23. Quality Assurance - Quality Control

Comment:

Comments were associated with the apparent difference between the quality assurance criteria proposed and the previous quality assurance criteria.

Response:

The proposed rule quality assurance subpart was written to incorporate the previously referenced 10 CFR Part 50 Appendix B quality assurance criteria specifically into Part 72. There was no intent to change the criteria. Minor conforming changes have been made in the final rule.

24. Criticality

Comment:

A comment was received concerning the removal of the requirement for verifying continued efficacy of solid neutron poisons.

Response:

Several changes have been made to the criticality section of the final rule to make it correspond to other Parts of the Commission's regulations and standard criticality review practices. Verification of solid neutron poisons has been retained. Double contingency criteria and requirements for criticality monitors have been added. It is not the intent of the revision concerning criticality monitors to require monitors in the open areas where loaded casks are positioned for storage as that system is static. Monitors are required where the systems are dynamic.

25. MRS Storage Capacity

Comment:

Commenters questioned the MRS storage capacity as stated in the proposed rule in §§ 72.1 and 72.96 [§§ 72.1 and 72.75].

Response:

In the proposed rule, MRS storage capacity values are based on the NWPA, as approved by Congress. (See Section 135(a)(1)(A), 42 U.S.C. 10155(a)(1)(A) and Section 114(d), 42 U.S.C. 10134(d) and Section 141(g), 42 U.S.C. _____.) In addition, the

Nuclear Waste Policy Amendments Act of 1987 provides that the MRS authorized by Section 142(b) of NWPA shall be subject to the storage capacity limits specified in Section 148(d)(3) and (4). These requirements have been incorporated in new § 72.44(g) which has been added to the final rule.

26. The Term - "Temporary Storage"

Comment:

Comments objected to the removal of the term "Temporary Storage" from § 72.3 Definitions and the removal of the word "temporary" from § 72.2 Scope.

Response:

In making these changes, the Commission does not intend to change the scope of Part 72 which relates to the licensing of ISFSI and MRS for the purpose of storage only. Part 72 does not nor is it intended to cover permanent disposal. Accordingly, use of the word "temporary" in the rule is non-definitive and unnecessary.

27. MRS Rule Making

Comment:

Many commenters (approximately 150), through the use of form letters or paraphrasing, did not want the MRS in Tennessee, did not support any form of rulemaking until Congress had authorized the MRS through funding appropriation, and made reference to "license it twice."

Response:

The Nuclear Waste Policy Amendments Act of 1987 authorizes the Department of Energy to site, construct and operate one MRS and prescribes procedures for the selection of an appropriate site. The Act expressly annuls and revokes the Department's proposal "to locate a monitored retrievable storage facility at a site on the Clinch River in the Roane County portion of Oak Ridge, Tennessee, with alternative sites on the Oak Ridge Reservation of the Department of Energy and on the former site of a proposed nuclear powerplant in Hartsville, Tennessee..." (Section 142(a), (remaining citation to be provided). The Commission's regulations are promulgated to permit the Commission to carry out its mandate of providing for the health and safety of the public. Except for the siting limitations in § 72.96 [§ 72.75] of the final rule, which, among other things, prohibits an MRS authorized by Section 142(b) of NWPA from being constructed in Nevada, the Commission's regulations are silent on the location of an MRS. The "license it twice" concept is addressed in Response Number 2.

28. Increase of Licensing Period for the MRS**Comment:**

Comments questioned the Commission's basis, as described in the statement of considerations for the proposed changes to Part 72, for providing a longer license term for an MRS (40 years) than for an ISFSI (20 years). Comments also included (1) the term

should start with the receipt of spent fuel, and (2) ISFSI should also have a 40-year license term. Further explanation of the basis for the license term was also requested. All of the commenters seemed to concentrate on a license for the spent fuel rather than a license covering a facility for storage.

Response:

An MRS as described in the NWPA is intended for storage, but not necessarily for the same fuel since fuel will continually be moved in and out over the life of the facility in concert with operation of a repository. A longer license term is therefore appropriate for an MRS considering the purpose and mode of operation of the facility.

In contrast to the MRS, the spent fuel stored in an ISFSI at reactor sites or elsewhere will be collected until the Department of Energy waste disposal system is ready for its receipt. The current schedule indicates that this transfer from reactor sites to an MRS could begin to occur within about 10 years. The Commission has in place a license renewal process for ISFSI storage which provides an opportunity for extension of the 20-year license term, with staff reevaluation of safety and environmental aspects of the operation. In any event the systematic inspection program of the Commission wherein the licensee's adherence to all license conditions and technical specifications

is continually being examined applies to both MRS and ISFSI storage over the entire period of a license. The Commission will provide a 40-year license term for an MRS in the final rule.

On December 22, 1987, the Nuclear Waste Policy Amendments Act of 1987 (Subtitle A of Title V of the Omnibus Budget Reconciliation Act for Fiscal Year 1988; Public Law 100-203) was approved by the President and became public law. The 1987 amendments authorized the Secretary of the Department of Energy to site, construct and operate one monitored retrievable storage facility subject to certain statutory conditions (sec. 142(b)). As a result of these changes in the statute, it has been necessary to make certain conforming changes in the text of the final rule. Most of the changes are minor in nature. For example, references have been added to the authority section and conforming changes have been made in the following sections of the rule: §§ 72.22(d)(5), 72.40(b), 72.90(e) and 72.96(d) [§§ 72.14(d)(5), 72.31(b), 72.70(e) and 72.75(d)]. A new paragraph (g) has been added to § 72.44 [§ 72.33], License conditions, to incorporate into the Commission's regulations the specific statutory conditions (see sec. 148(d) of the NWPA) which must be included in a Commission license for the monitored retrievable storage installation authorized pursuant to section 142(b) of the NWPA. For an explanation of these conditions, see 133 Cong. Rec. H11973-75 and S18683-84 (daily ed. December 21, 1987).

Having considered all of the above, the Commission has determined that a final rule be promulgated. The text of the final rule has some changes as noted from the proposed rule.

Finding of No Significant Environmental Impact

The Commission has determined not to prepare an environmental impact statement for the proposed amendments to 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

NUREG-0575, "Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel," August 1979, was issued in support of the final rule promulgating 10 CFR Part 72. "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation ISFSI)," which became effective November 28, 1980. On January 7, 1983 the Nuclear Waste Policy Act of 1982 was signed into law. On December 22, 1987, the Act was amended by the Nuclear Waste Policy Amendments Act of 1987 (Public Law 100-203, Title V, Subtitle A). Section 142(b) of the amended Act authorized the Secretary of the Department of Energy to site, construct and operate one MRS. NWSA also established procedures which a State or an Indian tribe may use to negotiate an agreement with the Federal Government under which the State or Indian tribe would agree to host an MRS within the State or reservation. Following enactment of legislation to implement the negotiated agreement, the Secretary of the Department of Energy could proceed to evaluate appropriate sites. As in the case of the MRS authorized by Section 142(b) of NWSA, DOE must also obtain an NRC license for an MRS authorized by Congress pursuant to a negotiated agreement. The NRC staff has concluded that although existing 10 CFR Part 72 is generally applicable to the design, construction, operation, and decommissioning of MRS, additions are necessary to explicitly cover the licensing of spent nuclear fuel and high-level radioactive waste storage in an MRS. In

August 1984, the NRC published an environmental assessment for this proposed revision of Part 72, NUREG-1092, "Environmental Assessment for 10 CFR Part 72, Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste." NUREG-1092 discusses the major issues of the rule and the potential impact on the environment. The findings of the environmental assessment are "(1) past experience with water pool storage of spent fuel establishes the technology for long-term storage of spent fuel without affecting the health and safety of the public, (2) the proposed rulemaking to include the criteria of 10 CFR Part 72 for storing spent nuclear fuel and high-level radioactive waste does not significantly affect the environment, (3) solid high-level waste is comparable to spent fuel in its heat generation and in its radioactive material content on a per metric ton basis, and (4) knowledge of material degradation mechanisms under dry storage conditions and the ability to institute repairs in a reasonable manner without endangering the health [and safety] of the public shows dry storage technology options do not significantly impact the environment." The assessment concludes that, among other things, there are no significant environmental impacts as a result of promulgation of these revisions of 10 CFR Part 72.

Based on the above assessment the Commission concludes that the rulemaking action will not have a significant incremental environmental impact on the quality of the human environment.

Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget approval number 3150-0132.

Regulatory Analysis

The NRC has prepared a regulatory analysis on this final rule. The analysis examines the benefits and alternatives considered by the NRC. The analysis is available for inspection in the NRC Public Document Room, 1717 H Street NW., Washington, DC. Single copies of the analysis may be obtained from C. W. Nilsen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-492-3834).

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, (5 U.S.C. 605(b)), the Commission certifies that this rule will not have a significant economic impact on a substantial number of small entities. This final rule affects only the licensing and operation of independent spent fuel storage installations and of monitored retrievable storage installations. The owners of these installations, nuclear power plant utilities or DOE, do not fall within the scope of the definition of "small entities" set forth in section 601(3) of the Regulatory Flexibility Act or within the definition of "small business" in section 3 of the Small Business Act, 15 U.S.C. 632, or within the Small Business Size Standards set out in regulations issued by the Small Business Administration at 13 CFR Part 121.

List of Subjects in 10 CFR Parts 2, 19, 20, 21, 51,
70, 72, 73, 75, and 150

Part 2 - Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalty, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

Part 19 - Environmental protection, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Penalty, Radiation protection, Reporting and recordkeeping requirements, Sex discrimination.

Part 20 - Byproduct material, Licensed material, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Special nuclear material, Source material, Waste treatment and disposal.

Part 21 - Nuclear power plants and reactors, Penalty, Radiation protection, Reporting and recordkeeping requirements.

Part 51 - Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

Part 70 - Hazardous materials - transportation, Material control and accounting, Nuclear materials, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

Part 72 - Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

Part 73 - Hazardous materials - transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 75 - Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements, Security measures.

Part 150 - Hazardous materials - transportation, Intergovernmental relations, Nuclear materials, Penalty, Reporting and recordkeeping

requirements, Security measures, Source material, Special nuclear material.

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, 5 U.S.C. 552 and 553, and the Nuclear Waste Policy Act of 1982, the NRC is adopting the following revision to 10 CFR Part 72 and related conforming amendments to 10 CFR Parts 2, 19, 20, 21, 51, 70, 73, 75, and 150.

1. 10 CFR Part 72 is revised to read as follows:

PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT
STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Subpart A--General Provisions

Sec.

- 72.1 Purpose.
- 72.2 Scope.
- 72.3 Definitions.
- 72.4 Communications.
- 72.5 Interpretations.
- 72.6 License required; types of licenses.
- 72.7 Specific exemptions.
- 72.8 Denial of licensing by Agreement States.
- 72.9 Information collection requirements: OMB approval.
- 72.10 Employee protection.

Subpart B--License Application, Form, and Contents

- 72.16 Filing of application for specific license.
- 72.18 Elimination of repetition.
- 72.20 Public inspection of application.
- 72.22 Contents of application: General and financial information.
- 72.24 Contents of application: Technical information.
- 72.26 Contents of application: Technical specifications.
- 72.28 Contents of application: Applicant's technical qualifications.
- 72.30 Decommissioning planning, including financing and recordkeeping.
- 72.32 Emergency plan.
- 72.34 Environmental report.

Subpart C--Issuance and Conditions of License

- 72.40 Issuance of license.
- 72.42 Duration of license; renewal.
- 72.44 License conditions.
- 72.46 Public hearings.
- 72.48 Changes, tests, and experiments.
- 72.50 Transfer of license.
- 72.52 Creditor regulations.
- 72.54 Application for termination of license.
- 72.56 Application for amendment of license.
- 72.58 Issuance of amendment.
- 72.60 Modification, revocation, and suspension of license.
- 72.62 Backfitting.

Subpart D--Records, Reports, Inspections, and Enforcement

- 72.70 Safety analysis report updating.

- 72.72 Material balance, inventory, and records requirements for stored materials.
- 72.74 Reports of accidental criticality or loss of special nuclear material.
- 72.76 Material status reports.
- 72.78 Nuclear material transfer reports.
- 72.80 Other records and reports.
- 72.82 Inspections and tests.
- 72.84 Violations.

Subpart E--Siting Evaluation Factors

- 72.90 General considerations.
- 72.92 Design basis external natural events.
- 72.94 Design basis external man-induced events.
- 72.96 Siting limitations.
- 72.98 Identifying regions around an ISFSI or MRS site.
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Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100-203, __ Stat. ____ (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, ____).

Section 72.44(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100-203, __ Stat. ____ . Section 72.46 also issued under sec. 189,

68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100-203, __ Stat. __. Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2244 (42 U.S.C. 10101, 10137(a), 10161(h)).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 72.6, 72.22, 72.24, 72.26, 72.28(d), 72.30, 72.32, 72.44(a), (b)(1), (4), (5), (c), (d)(1), (2), (e), (f), 72.48(a), 72.50(a), 72.52(b), 72.72(b), (c), 72.74(a), (b), 72.76, 72.78, 72.104, 72.106, 72.120, 72.122, 72.124, 72.126, 72.128, 72.130, 72.140(b), (c), 72.148, 72.154, 72.156, 72.160, 72.166, 72.168, 72.170, 72.172, 72.176, 72.180, 72.184, 72.186 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 72.10(a), (e), 72.22, 72.24, 72.26, 72.28, 72.30, 72.32, 72.44(a), (b)(1), (4), (5), (c), (d)(1), (2), (e), (f), 72.48(a), 72.50(a), 72.52(b), 72.90(a)-(d), (f), 72.92, 72.94, 72.98, 72.100, 72.102(c), (d), (f), 72.104, 72.106, 72.120, 72.122, 72.124, 72.126, 72.128, 72.130, 72.140(b), (c), 72.142, 72.144, 72.146, 72.148, 72.150, 72.152, 72.154, 72.156, 72.158, 72.160, 72.162, 72.164, 72.166, 72.168, 72.170, 72.172, 72.176, 72.180, 72.182, 72.184, 72.186, 72.190, 72.192, 72.194 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 72.10(e), 72.16, 72.22, 72.24, 72.26, 72.28, 72.30, 72.32, 72.44(b)(3), (c)(5), (d)(3), (e), (f), 72.48(b), (c), 72.50(b), 72.54(a), (b), (c), 72.56, 72.70, 72.72, 72.74(a), (b), 72.76(a), 72.78(a), 72.80, 72.82, 72.92(b), 72.94(b), 72.140(b), (c), (d), 72.144(a), 72.146, 72.148, 72.150, 72.152, 72.154(a), (b), 72.156, 72.160, 72.162, 72.168, 72.170, 72.172, 72.174, 72.176, 72.180, 72.184, 72.186, 72.192 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

Subpart A--General Provisions

§ 72.1 Purpose.

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to receive, transfer, and possess power reactor spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) and the terms and conditions under which the Commission will issue such licenses, including licenses to the U.S. Department of Energy (DOE) for the provision of not more than 1900 metric tons of spent fuel storage capacity at facilities not owned by the Federal Government on January 7, 1983 for the Federal interim storage program under Subtitle B - Interim Storage Program of the Nuclear Waste Policy Act of 1982 (NWPAA). The regulations in this part also establish requirements, procedures, and criteria for the issuance of licenses to DOE to receive, transfer, package, and possess power reactor spent fuel, high-level radioactive waste, and other radioactive materials associated with the spent fuel and high-level radioactive waste storage, in a monitored retrievable storage installation (MRS).

§ 72.2 Scope.

(a) Except as provided in § 72.6(b), licenses issued under this part are limited to the receipt, transfer, packaging, and possession of (1) power reactor spent fuel to be stored in a complex that is designed and constructed specifically for storage of power reactor spent fuel aged for at least one year, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation

(ISFSI); or (2) power reactor spent fuel to be stored in a monitored retrievable storage installation (MRS) owned by DOE that is designed and constructed specifically for the storage of spent fuel aged for at least one year, high-level radioactive waste that is in a solid form, and other radioactive materials associated with spent fuel or high-level radioactive waste storage. The term "Monitored Retrievable Storage Installation" or "MRS", as defined § 72.3, is derived from the NWPA and includes any installation that meets this definition.

(b) The regulations in this part pertaining to an independent spent fuel storage installation (ISFSI) apply to all persons in the United States, including persons in Agreement States. The regulations in this part pertaining to a monitored retrievable storage installation (MRS) apply only to DOE.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of (1) spent fuel in an independent spent fuel storage installation (ISFSI) and (2) spent fuel and solid high-level radioactive waste in a monitored retrievable storage installation (MRS).

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage installation shall be issued in accordance with the requirements of this part as stated in § 72.40, as applicable.

(e) As provided in section 135 of the Nuclear Waste Policy Act of 1982, Pub. L. 97-425, 96 Stat. 2201 at 2232 (42 U.S.C. 10155) the U.S. Department of Energy is not required to obtain a license under the regulations in this part to use available capacity at one or more facilities owned by the Federal Government on January 7, 1983, including the modification and expansion of any such facilities, for the storage of spent nuclear fuel from civilian nuclear power reactors.

§ 72.3 Definitions.

As used in this part:

"Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

"Affected Indian tribe" means any Indian tribe--(1) within whose reservation boundaries a monitored retrievable storage facility is proposed to be located; (2) whose federally defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by the locating of such a facility: Provided, That the Secretary of the Interior finds, upon the petition of the appropriate governmental officials of the tribe, that such effects are both substantial and adverse to the tribe.

"Affected unit of local government" means any unit of local government with jurisdiction over the site where an MRS is proposed to be located.

"As low as is reasonably achievable" (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to (1) benefits to the public health and safety, (2) other societal and socioeconomic considerations, and (3) the utilization of atomic energy in the public interest.

"Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

"Byproduct material" means 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.

"Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement or manufacture of components of the installation;
or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of paragraphs (1) and (2) of this definition.

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"Confinement systems" means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

"Controlled area" means that area immediately surrounding an ISFSI or MRS for which the licensee exercises authority over its use and within which ISFSI or MRS operations are performed.

"Decommission" means to remove (as a facility) safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of license.

"Design bases" means that information that identifies the specific functions to be performed by a structure, system, or component of a

facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include: (1) estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved and (2) estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region taking into account the site characteristics and the risks associated with the event.

"Design capacity" means the quantity of spent fuel or high-level radioactive waste, the maximum burnup of the spent fuel in MWD/MTU, the curie content of the waste, and the total heat generation in BTU per hour that the storage installation is designed to accommodate.

"DOE" means the U.S. Department of Energy or its duly authorized representatives.

"Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands. Areas subject to a one percent or greater chance of flooding in any given year are included.

"High-level radioactive waste" or "HLW" means (1) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid

material derived from such liquid waste that contains fission products in sufficient concentrations; and (2) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.

"Historical data" means a compilation of the available published and unpublished information concerning a particular type of event.

"Independent spent fuel storage installation" or "ISFSI" means a complex designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage. An ISFSI which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with such other facility and still be considered independent: Provided, that such sharing of utilities and services or physical connections does not: (1) Increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or (2) reduce the margin of safety as defined in the basis for any technical specification of either facility.

"Indian Tribe" means an Indian tribe as defined in the Indian Self Determination and Education Assistance Act (Public Law 93-638).

"Monitored Retrievable Storage Installation" or "MRS" means a complex designed, constructed, and operated by DOE for the receipt, transfer, handling, packaging, possession, safeguarding, and storage of spent nuclear fuel aged for at least one year and solidified high-level radioactive waste resulting from civilian nuclear activities, pending shipment to a HLW repository or other disposal.

"NEPA" means the National Environmental Policy Act of 1969 including any amendments thereto.

"NWPA" means the Nuclear Waste Policy Act of 1982 including any amendments thereto.

"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 (DOE), except that the DOE 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, as amended (88 Stat. 1244), and Sections 131, 132, 133, 135, 137, and 141 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2229, 2230, 2232, 2241); (2) any State, any political subdivision of a State, or any political entity within a State; (3) any foreign government or nation, or any political subdivision of any such government or nation, or other entity; and (4) any legal successor, representative, agent, or agency of the foregoing.

"Population" means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI or MRS.

"Region" means the geographical area surrounding and including the site, which is large enough to contain all the features related to a phenomenon or to a particular event that could potentially impact the safe or environmentally sound construction, operation, or decommissioning of an independent spent fuel storage or monitored retrievable storage installation.

"Reservation" means (1) any Indian reservation or dependent Indian community referred to in clause (a) or (b) of section 1151 of title 18,

United States Code; or (2) any land selected by an Alaska Native village or regional corporation under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

"Site" means the real property on which the ISFSI or MRS is located.

"Source material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores that contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

"Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material.

"Spent Nuclear Fuel" or "Spent Fuel" means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

"Structures, systems, and components important to safety" mean those features of the ISFSI or MRS whose function is (1) to maintain the conditions required to store spent fuel or high-level radioactive waste safely, (2) to prevent damage to the spent fuel or the high-level radioactive waste container during handling and storage, or (3) to provide reasonable

assurance that spent fuel or high-level radioactive waste can be received, handled, packaged, stored, and retrieved without undue risk to the health and safety of the public.

§ 72.4 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be addressed to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Communications, reports, and applications may be delivered in person at the Commission's Offices at 11555 Rockville Pike, Rockville, Maryland, or at 1717 H Street NW., Washington, DC.

§ 72.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 72.6 License required; types of licenses.

(a) Licenses for the receipt, handling, storage, and transfer of spent fuel or high-level radioactive waste are of two types: general and specific. Any general license provided in this part is effective without the filing of an application with the Commission or the issuance of a licensing document to a particular person. A specific license is issued

to a named person upon application filed pursuant to regulations in this part.

(b) A general license is hereby issued to receive title to and own spent fuel or high-level radioactive waste without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to acquire, deliver, receive, possess, use, or transfer spent fuel or high-level radioactive waste except as authorized in a specific license.

(c) Except as authorized in a specific license issued by the Commission in accordance with the regulations in this part, no person may acquire, receive, or possess--

(1) spent fuel for the purpose of storage in an ISFSI; or

(2) spent fuel, high-level radioactive waste, or radioactive material associated with high-level radioactive waste for the purpose of storage in a MRS.

§ 72.7 Specific exemptions.

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

§ 72.8 Denial of licensing by Agreement States.

Agreement States may not issue licenses covering the storage of spent fuel in an ISFSI or the storage of spent fuel and high-level radioactive waste in an MRS.

§ 72.9 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). OMB has approved the information collection requirements contained in this part under control number 3150-0132.

(b) The approved information collection requirements contained in this part appear in §§ 72.16, 72.22 through 72.34, 72.42, 72.44, 72.48 through 72.56, 72.62, 72.70 through 72.82, 72.90, 72.92, 72.94, 72.98, 72.100, 72.102, 72.104, 72.108, 72.120, 72.126, 72.140 through 72.176, 72.180 through 72.186, and 72.192.

§ 72.10 Employee protection.

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, and privileges of employment. The protected activities are established in section 210 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act.

(1) The protected activities include but are not limited to--

(i) Providing the Commission information about possible violations of requirements imposed under either of the above statutes;

(ii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements; or

(iii) Testifying in any Commission proceeding.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in the protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 30 days after an alleged violation occurs by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant, may be grounds for--

- (1) Denial, revocation, or suspension of the license.
- (2) Imposition of a civil penalty on the licensee or applicant.
- (3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e) (1) Each licensee and each applicant shall post Form NRC-3, "Notice to Employees," on its premises. Posting must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of Form NRC-3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix A, Part 73 of this chapter or the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Subpart B--License Application, Form, and Contents

§ 72.16 Filing of application for specific license.

(a) Place of filing. Each application for a license, or amendment thereof, under this part should be filed with the Director, Division of Industrial and Medical Nuclear Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Applications, communications, reports, and correspondence may also be

delivered in person at the Commission's offices at 11555 Rockville Pike, Rockville, Maryland, or at 1717 H Street NW., Washington, DC.

(b) Oath or affirmation. Each application for a license or license amendment (including amendments to such applications), except for those filed by DOE, must be executed in an original signed by the applicant or duly authorized officer thereof under oath or affirmation. Each application for a license or license amendment (including amendments to such applications) filed by DOE must be signed by the Secretary of Energy or the Secretary's authorized representative.

(c) Number of copies of application. Each filing of an application for a license or license amendment under this part (including amendments to such applications) must include, in addition to a signed original, 15 copies of each portion of such application, safety analysis report, environmental report, and any amendments. Another 125 copies shall be retained by the applicant for distribution in accordance with instruction from the Director or the Director's designee.

(d) Fees. The application, amendment, and renewal fees applicable to a license covering the storage of spent fuel in an ISFSI are those shown in § 170.31 of this chapter.

(e) Notice of docketing. Upon receipt of an application for a license or license amendment under this part, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee will assign a docket number to the application, notify the applicant of the docket number, instruct the applicant to distribute copies retained by the applicant in accordance with paragraph (c) of this section, and cause a notice of docketing to be published in the Federal Register. The notice of docketing shall identify the site of the ISFSI or the MRS by locality

and State and may include a notice of hearing or a notice of proposed action and opportunity for hearing as provided by § 72.46 of this part. In the case of an application for a license or an amendment to a license for an MRS, the Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee, in accordance with § 72.200 of this part, shall send a copy of the notice of docketing to the Governor and legislature of any State in which an MRS is or may be located, to the Chief Executive of the local municipality, to the Governors of any contiguous States and to the governing body of any affected Indian tribe.

§ 72.18 Elimination of repetition.

In any application under this part, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: Provided, That such references are clear and specific.

§ 72.20 Public inspection of application.

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with provisions of the regulations contained in Parts 2 and 9 of this chapter.

§ 72.22 Contents of application: General and financial information.

Each application must state:

- (a) Full name of applicant;
- (b) Address of applicant;

- (c) Description of business or occupation of applicant;
- (d) If applicant is:
 - (1) An individual: citizenship and age;
 - (2) A partnership: name, citizenship, and address of each partner and the principal location at which the partnership does business;
 - (3) A corporation or an unincorporated association:
 - (i) The State in which it is incorporated or organized and the principal location at which it does business; and
 - (ii) The names, addresses, and citizenship of its directors and principal officers;
 - (4) Acting as an agent or representative of another person in filing the application: the identification of the principal and the information required under this paragraph with respect to such principal.
- (5) The Department of Energy:
 - (i) The identification of the DOE organization responsible for the construction and operation of the ISFSI or MRS, including a description of any delegations of authority and assignments of responsibilities.
 - (ii) For each application for a license for an MRS, the provisions of the public law authorizing the construction and operation of the MRS.
- (e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested.

The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary funds; or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

- (1) Estimated construction costs;
- (2) Estimated operating costs over the planned life of the ISFSI;

and

- (3) Estimated decommissioning costs, and the necessary financial arrangements to provide reasonable assurance prior to licensing that decommissioning will be carried out after the removal of spent fuel and/or high-level radioactive waste from storage.

§ 72.24 Contents of application: Technical information.

Each application for a license under this part must include a Safety Analysis Report describing the proposed ISFSI or MRS for the receipt, handling, packaging, and storage of spent fuel or high-level radioactive waste, including how the ISFSI or MRS will be operated. The minimum information to be included in this report must consist of the following:

- (a) A description and safety assessment of the site on which the ISFSI or MRS is to be located, with appropriate attention to the design bases for external events. Such assessment must contain an analysis and evaluation of the major structures, systems, and components of the ISFSI or MRS that bear on the suitability of the site when the ISFSI or MRS is operated at its design capacity. If the proposed ISFSI or MRS is to be located on the site of a nuclear power plant or other licensed facility, the potential interactions between the ISFSI or MRS and such other facility must be evaluated.

(b) A description and discussion of the ISFSI or MRS structures with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(c) The design of the ISFSI or MRS in sufficient detail to support the findings in § 72.40, including:

(1) The design criteria for the ISFSI or MRS pursuant to Subpart F of this part, with identification and justification for any additions to or departures from the general design criteria;

(2) The design bases and the relation of the design bases to the design criteria;

(3) Information relative to materials of construction, general arrangement, dimensions of principal structures, and descriptions of all structures, systems, and components important to safety, in sufficient detail to support a finding that the ISFSI or MRS will satisfy the design bases with an adequate margin for safety; and

(4) Applicable codes and standards.

(d) An analysis and evaluation of the design and performance of structures, systems, and components important to safety, with the objective of assessing the impact on public health and safety resulting from operation of the ISFSI or MRS and including determination of:

(1) The margins of safety during normal operations and expected operational occurrences during the life of the ISFSI or MRS; and

(2) The adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents, including natural and manmade phenomena and events.

(e) The means for controlling and limiting occupational radiation exposures within the limits given in Part 20 of this chapter, and for

meeting the objective of maintaining exposures as low as is reasonably achievable.

(f) The features of ISFSI or MRS design and operating modes to reduce to the extent practicable radioactive waste volumes generated at the installation.

(g) An identification and justification for the selection of those subjects that will be probable license conditions and technical specifications. These subjects must cover the design, construction, preoperational testing, operation, and decommissioning of the ISFSI or MRS.

(h) A plan for the conduct of operations, including the planned managerial and administrative controls system, and the applicant's organization, and program for training of personnel pursuant to Subpart I.

(i) If the proposed ISFSI or MRS incorporates structures, systems, or components important to safety whose functional adequacy or reliability have not been demonstrated by prior use for that purpose or cannot be demonstrated by reference to performance data in related applications or to widely accepted engineering principles, an identification of these structures, systems, or components along with a schedule showing how safety questions will be resolved prior to the initial receipt of spent fuel or high-level radioactive waste for storage at the ISFSI or MRS.

(j) The technical qualifications of the applicant to engage in the proposed activities, as required by § 72.28.

(k) A description of the applicant's plans for coping with emergencies, as required by § 72.32.

(l) A description of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents

produced during normal operations and expected operational occurrences. The description must identify the design objectives and the means to be used for keeping levels of radioactive material in effluents to the environment as low as is reasonably achievable and within the exposure limits stated in § 72.104. The description must include:

(1) An estimate of the quantity of each of the principal radio-nuclides expected to be released annually to the environment in liquid and gaseous effluents produced during normal ISFSI or MRS operations;

(2) A description of the equipment and processes used in radioactive waste systems; and

(3) A general description of the provisions for packaging, storage, and disposal of solid wastes containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(m) An analysis of the potential dose equivalent or committed dose equivalent to an individual outside the controlled area from accidents or natural phenomena events that result in the release of radioactive material to the environment or direct radiation from the ISFSI or MRS. The calculations of individual dose equivalent or committed dose equivalent must be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event.

(n) A description of the quality assurance program that satisfies the requirements of Subpart G to be applied to the design, fabrication, construction, testing, operation, modification, and decommissioning of the structures, systems, and components of the ISFSI or MRS important to safety. The description must identify the structures, systems, and components important to safety. The program must also apply to managerial and administrative controls used to ensure safe operation of the ISFSI or MRS.

(o) A description of the detailed security measures for physical protection, including design features and the plans required by Subpart H. For an application from DOE for an ISFSI or MRS, DOE will provide a description of the physical security plan for protection against radiological sabotage as required by Subpart H. An application submitted by DOE for an ISFSI or MRS must include a certification that it will provide at the ISFSI or MRS such safeguards as it requires at comparable surface DOE facilities to promote the common defense and security.

(p) A description of the program covering preoperational testing and initial operations.

(q) A description of the decommissioning plan required under § 72.30.

§ 72.26 Contents of application: Technical specifications.

Each application under this part shall include proposed technical specifications in accordance with the requirements of § 72.44 and a summary statement of the bases and justifications for these technical specifications.

§ 72.28 Contents of application: Applicant's technical qualifications.

Each application under this part must include:

- (a) The technical qualifications, including training and experience, of the applicant to engage in the proposed activities;
- (b) A description of the personnel training program required under Subpart I;
- (c) A description of the applicant's operating organization, delegations of responsibility and authority, and the minimum skills and

experience qualifications relevant to the various levels of responsibility and authority; and

(d) A commitment by the applicant to have and maintain an adequate complement of trained and certified installation personnel prior to the receipt of spent fuel or high-level radioactive waste for storage.

§ 72.30 Decommissioning planning, including financing and recordkeeping.

(a) Each application under this part must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel or high-level radioactive waste has been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI or MRS that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The decommissioning funding plan must contain information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS. This information must include a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (c) of this section, including means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI or MRS.

(c) Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid should the licensee default. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in Appendix A of 10 CFR Part 30. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within 30 days after receipt of notification of cancellation.

(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be

acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provision must be as stated in paragraph (c)(2) of this section.

(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.

(5) In the case of electric utility licensees, the methods of § 50.74(e)(1) and (3) of this chapter.

(d) Each licensee shall keep records of information important to the safe and effective decommissioning of the facility in an identified

location until the license is terminated by the Commission. If records of relevant information are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(i) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(ii) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(iii) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

§ 72.32 Emergency plan.

(a) [Reserved]

(b) [Reserved]

(c) For an ISFSI that is located on the site of a nuclear power reactor licensed for operation by the Commission, the emergency plan required by 10 CFR 50.47 shall be deemed to satisfy the requirements of this section.

§ 72.34 Environmental report.

Each application for an ISFSI or MRS license under this part must be accompanied by an Environmental Report which meets the requirements of Subpart A of Part 51 of this chapter.

Subpart C--Issuance and Conditions of License

§ 72.40 Issuance of license.

(a) Except as provided in paragraph (c) of this section, the Commission will issue a license under this part upon a determination that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that:

(1) The applicant's proposed ISFSI or MRS design complies with Subpart F;

(2) The proposed site complies with the criteria in Subpart E;

(3) If on the site of a nuclear power plant or other licensed activity or facility, the proposed ISFSI would not pose an undue risk to the safe operation of such nuclear power plant or other licensed activity or facility;

(4) The applicant is qualified by reason of training and experience to conduct the operation covered by the regulations in this part;

(5) The applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate;

(6) Except for DOE, the applicant for an ISFSI or MRS is financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(7) The applicant's quality assurance plan complies with Subpart G;

(8) The applicant's physical protection provisions comply with Subpart H. DOE has complied with the safeguards and physical security provisions identified in § 72.24(o);

(9) The applicant's personnel training program complies with Subpart I;

(10) Except for DOE, the applicant's decommissioning plan and its financing pursuant to § 72.30 provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public;

(11) The applicant's emergency plan complies with § 72.32;

(12) The applicable provisions of Part 170 of this chapter have been satisfied;

(13) There is reasonable assurance that: (i) the activities authorized by the license can be conducted without endangering the health and safety of the public and (ii) these activities will be conducted in compliance with the applicable regulations of this chapter; and

(14) The issuance of the license will not be inimical to the common defense and security.

(b) Grounds for denial of a license to store spent fuel in the proposed ISFSI or to store spent fuel and high-level radioactive waste in the proposed MRS may be the commencement of construction prior to (1) a finding by the Director, Office of Nuclear Materials Safety and Safeguards

or designee or (2) a finding after a public hearing by the presiding officer, Atomic Safety and Licensing Board, Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body, as appropriate that the action called for is the issuance of the proposed license with any appropriate conditions to protect environmental values. This finding is to be made on the basis of information filed and evaluations made pursuant to Subpart A of Part 51 of this chapter or in the case of an MRS on the basis of evaluations made pursuant to sections 141(c) and (d) or 148(a) and (c) of NWPA, as appropriate, and after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives.

(c) For facilities that have been covered under previous licensing actions including the issuance of a construction permit under Part 50 of this chapter, a reevaluation of the site is not required except where new information is discovered which could alter the original site evaluation findings. In this case, the site evaluation factors involved will be reevaluated.

§ 72.42 Duration of license; renewal.

(a) Each license issued under this part must be for a fixed period of time to be specified in the license. The license term for an ISFSI must not exceed 20 years from the date of issuance. The license term for an MRS must not exceed 40 years from the date of issuance. Licenses for either type of installation may be renewed by the Commission at the expiration of the license term upon application by the licensee and pursuant to the requirements of this rule.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of Subpart B at least two years prior to the expiration of the existing license. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference: Provided, that such references are clear and specific.

(c) In any case in which a licensee, not less than two years prior to expiration of its existing license, has filed an application in proper form for renewal of a license, the existing license shall not expire until a final decision concerning the application for renewal has been made by the Commission.

§ 72.44 License conditions.

(a) Each license issued under this part shall include license conditions. The license conditions may be derived from the analyses and evaluations included in the Safety Analysis Report and amendments thereto submitted pursuant to § 72.24. License conditions pertain to design, construction and operation. The Commission may also include additional license conditions as it finds appropriate.

(b) Each license issued under this part shall be subject to the following conditions, even if they are not explicitly stated therein;

(1) Neither the license nor any right thereunder shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the

provisions of the Atomic Energy Act of 1954, as amended, and give its consent in writing.

(2) The license shall be subject to revocation, suspension, modification, or amendment in accordance with the procedures provided by the Atomic Energy Act of 1954, as amended, and Commission regulations.

(3) Upon request of the Commission, the licensee shall, at any time before expiration of the license, submit written statements, signed under oath or affirmation if appropriate, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(4) Prior to the receipt of spent fuel for storage at an ISFSI or the receipt of spent fuel and high-level radioactive waste for storage at an MRS, the licensee shall have in effect an NRC-approved program covering the training and certification of personnel that meets the requirements of Subpart I.

(5) The licensee shall permit the operation of the equipment and controls that are important to safety of the ISFSI or the MRS only by personnel whom the licensee has certified as being adequately trained to perform such operations, or by uncertified personnel who are under the direct visual supervision of a certified individual.

(6)(i) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title 11 (Bankruptcy) of the United States Code by or against:

(A) The licensee;

(B) An entity (as that term is defined in 11 U.S.C. 101(14)) Controlling the licensee or listing the license or licensee as property of the estate; or

(C) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(ii) This notification must indicate:

(A) The bankruptcy court in which the petition for bankruptcy was filed; and

(B) The date of the filing of the petition.

(c) Each license issued under this part must include technical specifications. Technical specifications must include requirements in the following categories:

(1) Functional and operating limits and monitoring instruments and limiting control settings. (i) Functional and operating limits for an ISFSI or MRS are limits on fuel or waste handling and storage conditions that are found to be necessary to protect the integrity of the stored fuel or waste container, to protect employees against occupational exposures and to guard against the uncontrolled release of radioactive materials; and (ii) Monitoring instruments and limiting control settings for an ISFSI or MRS are those related to fuel or waste handling and storage conditions having significant safety functions.

(2) Limiting conditions. Limiting conditions are the lowest functional capability or performance levels of equipment required for safe operation.

(3) Surveillance requirements. Surveillance requirements include: (i) inspection and monitoring of spent fuel or high-level radioactive waste in storage; (ii) inspection, test and calibration activities to ensure that the necessary integrity of required systems and components is maintained; (iii) confirmation that operation of the ISFSI or MRS is within the required functional and operating limits; and (iv) confirmation that the limiting conditions required for safe storage are met.

(4) Design features. Design features include items that would have a significant effect on safety if altered or modified, such as materials of construction and geometric arrangements.

(5) Administrative controls. Administrative controls include the organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel in an ISFSI and the storage of spent fuel and high-level radioactive waste in an MRS are performed in a safe manner.

(d) Each license authorizing the receipt, handling, and storage of spent fuel or high-level radioactive waste under this part must include technical specifications that, in addition to stating the limits on the release of radioactive materials for compliance with limits of Part 20 of this chapter and the "as low as is reasonably achievable" objectives for effluents, require that:

(1) Operating procedures for control of effluents be established and followed, and equipment in the radioactive waste treatment systems be maintained and used, to meet the requirements of § 72.104;

(2) An environmental monitoring program be established to ensure compliance with the technical specifications for effluents; and

(3) An annual report be submitted to the appropriate regional office specified in Appendix A of Part 73 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 60 days after January 1 of each year, specifying the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous 12 months of operation and such other

information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. On the basis of this report and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

(e) The licensee shall make no change that would decrease the effectiveness of the physical security plan prepared pursuant to § 72.180 without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 72.56. A licensee may make changes to the physical security plan without prior Commission approval, provided that such changes do not decrease the effectiveness of the plan. The licensee shall furnish to the Commission a report containing a description of each change within two months after the change is made, and shall maintain records of changes to the plan made without prior Commission approval for a period of 3 years from the date of the change.

(f) A licensee shall follow and maintain in effect an emergency plan that is approved by the Commission. The licensee may make changes to the approved plan without Commission approval only if such changes do not decrease the effectiveness of the plan. Within six months after any change is made, the licensee shall submit a report containing a description of any changes made in the plan to the appropriate NRC Regional Office specified in Appendix A to Part 73 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Proposed changes

that decrease the effectiveness of the approved emergency plan must not be implemented unless the licensee has received prior approval of such changes from the Commission.

(g) A license issued to DOE under this part for an MRS authorized by section 142(b) of NWPA must include the following conditions:

(1) Construction of the MRS may not begin until the Commission has authorized the construction of a repository under section 114(d) of NWPA and Part 60 of this chapter;

(2) Construction of the MRS or acceptance of spent nuclear fuel or high-level radioactive waste at the MRS is prohibited during such time as the repository license is revoked by the Commission or construction of the repository ceases;

(3) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 10,000 metric tons of heavy metal until a repository authorized under NWPA and Part 60 of this chapter first accepts spent nuclear fuel or solidified high-level radioactive waste; and

(4) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 15,000 metric tons of heavy metal.

§ 72.46 Public hearings.

(a) In connection with each application for a license under this part, the Commission shall issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with § 2.105 or § 2.1107 of this chapter, as appropriate, or, if the Commission finds

that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(b)(1) In connection with each application for an amendment to a license under this part, the Commission shall, except as provided in paragraph (b)(2) of this section, issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with § 2.105 or § 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(2) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee may dispense with a notice of proposed action and opportunity for hearing or a notice of hearing and take immediate action on an amendment to a license issued under this part upon a determination that the amendment does not present a genuine issue as to whether the health and safety of the public will be significantly affected. After taking the action, the Director or the Director's designee shall promptly publish a notice in the Federal Register of the action taken and of the right of interested persons to request a hearing on whether the action should be rescinded or modified. If the action taken amends an MRS license, the Director or the Director's designee shall also inform the appropriate State and local officials.

(c) The notice of proposed action and opportunity for hearing or the notice of hearing may be included in the notice of docketing required to be published by § 72.16 of this part.

(d) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice of proposed action and

opportunity for hearing, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee may take the proposed action, and thereafter shall promptly inform the appropriate State and local officials and publish a notice in the Federal Register of the action taken. In accordance with § 2.764(c) of this chapter, the Director, Office of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an ISFSI or an MRS until expressly authorized to do so by the Commission.

§ 72.48 Changes, tests, and experiments.

(a)(1) The holder of a license issued under this part may (i) make changes in the ISFSI or MRS described in the Safety Analysis Report, (ii) make changes in the procedures described in the Safety Analysis Report, or (iii) conduct tests or experiments not described in the Safety Analysis Report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, a significant increase in occupational exposure or a significant unreviewed environmental impact.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

(b)(1) The licensee shall maintain records of changes in the ISFSI or MRS and of changes in procedures made pursuant to this section if these changes constitute changes in the ISFSI or MRS or procedures described in the Safety Analysis Report. The licensee shall also maintain records of tests and experiments carried out pursuant to paragraph (a) of this section. These records must include a written safety evaluation that provides the bases for the determination that the change, test, or experiment does not involve an unreviewed safety question. The records of changes in the ISFSI or MRS and of changes in procedures and records of tests must be maintained until the Commission terminates the license.

(2) Annually, or at such shorter interval as may be specified in the license, the licensee shall furnish to the appropriate regional office, specified in Appendix A of Part 73 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a brief description of changes, tests, and experiments made under paragraph (a) of the section, including a summary of the safety evaluation of each. Any report submitted by a licensee pursuant to this paragraph will be made a part of the public record pertaining to this license.

(c) The holder of a license issued under this part who desires (1) to make changes in the ISFSI or MRS or the procedures as described in the Safety Analysis Report, or to conduct tests or experiments not described in the Safety Analysis Report, that involve an unreviewed safety question, a significant increase in occupational exposure, or significant unreviewed environmental impact, or (2) to change the license conditions shall submit an application for amendment of the license, pursuant to § 72.56.

§ 72.50 Transfer of license.

(a) No license or any right included in a license issued under this part for an ISFSI or MRS shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license must include as much of the information described in §§ 72.22 and 72.28 with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application must also include a statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right--subject to the licensing requirements of the Act and these regulations--to possession of the radioactive materials and the storage installation involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines that:

(1) The proposed transferee is qualified to be the holder of the license; and

(2) Transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission.

§ 72.52 Creditor regulations.

(a) This section does not apply to an ISFSI or MRS constructed and operated by DOE.

(b) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not owned by the United States that is the subject of a license or on any interest in special nuclear material in spent fuel; Provided:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing possession or the transfer of the license.

(c) Any creditor so secured may apply for transfer of the license covering spent fuel by filing an application for transfer of the license pursuant to § 72.50(b). The Commission will act upon the application pursuant to § 72.50(c).

(d) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(e) As used in this section, "creditor" includes, without implied limitation, the trustee under any mortgage, pledge, or lien on spent fuel in storage made to secure any creditor; any trustee or receiver of spent fuel appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien; any purchaser of the spent fuel at the sale thereof upon foreclosure of the mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or any assignee of any such purchaser.

§ 72.54 Application for termination of license.

(a) Any licensee may apply to the Commission for authority to surrender a license voluntarily and to decommission the ISFSI or MRS. This application must be made within two years following permanent cessation of operations, and in no case later than one year prior to expiration of the license. Each application for termination of license must be accompanied, or preceded, by a proposed final decommissioning plan.

(b) The proposed final decommissioning plan must include--

(1) The choice of the alternative for decommissioning with a description of activities involved. An alternative is acceptable if it provides for completion of decommissioning without significant delay. Consideration will be given to an alternative which provides for delayed completion of decommissioning only when necessary to protect the public health and safety. Factors to be considered in evaluating an alternative

which provides for delayed completion of decommissioning include unavailability of waste disposal capacity and other site specific factors affecting the licensee's capability to carry out decommissioning safely, including presence of other nuclear facilities at the site.

(2) A description of controls and limits on procedures and equipment to protect occupational and public health and safety;

(3) A description of the planned final radiation survey; and

(4) An updated detailed cost estimate for the chosen alternative for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning including means for adjusting cost estimates and associated funding levels over any storage or surveillance period.

(5) A description of technical specifications and quality assurance provisions in place during decommissioning.

(c) For final decommissioning plans in which the major dismantlement activities are delayed by first placing the ISFSI or MRS in storage, planning for these delayed activities may be less detailed. Updated detailed plans must be submitted and approved prior to the start of such activities.

(d) If the final decommissioning plan demonstrates that the decommissioning will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public, and after notice to interested persons, the Commission will approve the plan subject to such conditions and limitations as it deems appropriate and necessary and issue an order authorizing the decommissioning.

(e) The Commission will terminate the license if it determines that--

(1) The decommissioning has been performed in accordance with the approved final decommissioning plan and the order authorizing decommissioning; and

(2) The terminal radiation survey and associated documentation demonstrates that the ISFSI or MRS and site are suitable for release for unrestricted use.

§ 72.56 Application for amendment of license.

Whenever a holder of a license desires to amend the license, an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

§ 72.58 Issuance of amendment.

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

§ 72.60 Modification, revocation, and suspension of license.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, as amended, or by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following:

(1) Any material false statement in the application or in any statement of fact required under Section 182 of the Act;

(2) Conditions revealed by the application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application;

(3) Failure to operate an ISFSI or MRS in accordance with the terms of the license;

(4) Violation of, or failure to observe, any of the terms and conditions of the Act, or of any applicable regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission prior to following any of the procedures provided under sections 551-558 of Title 5 of the United States Code, may cause the taking of possession of any special nuclear material contained in spent fuel held by the licensee.

§ 72.62 Backfitting.

(a) As used in this section, "backfitting" means the addition, elimination, or modification, after the license has been issued, of

(1) structures, systems, or components of an ISFSI or MRS, or

(2) procedures or organization required to operate an ISFSI or MRS.

(b) The Commission will require backfitting of an ISFSI or MRS if it finds that such action is necessary to assure adequate protection to occupational or public health and safety, or to bring the ISFSI or MRS into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by a licensee.

(c) The Commission may require the backfitting of an ISFSI or MRS if it finds (1) that there is a substantial increase in the overall protection of the occupational or public health and safety to be derived from the backfit, and (2) that the direct and indirect costs of implementation for that ISFSI or MRS are justified in view of this increased protection.

(d) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of an ISFSI or MRS as it deems appropriate.

Subpart D--Records, Reports, Inspections, and Enforcement

§ 72.70 Safety analysis report updating.

(a) The design, description of planned operations, and other information submitted in the Safety Analysis Report shall be updated by the licensee and submitted to the Commission at least once every six months after issuance of the license during final design and construction, until preoperational testing is completed, with final Safety Analysis Report completion and submittal to the Commission at least 90 days prior to the planned receipt of spent fuel or high-level radioactive waste. The final submittal must include a final analysis and evaluation of the design and performance of structures, systems, and components that are important to safety taking into account any pertinent information developed since the submittal of the license application.

(b) After the first receipt of spent fuel or high-level radioactive waste for storage, the Safety Analysis Report must be updated annually and submitted to the Commission by the licensee. This submittal must include the following:

(1) New or revised information relating to applicable site evaluation factors, including the results of environmental monitoring programs.

(2) A description and analysis of changes in the structures, systems, and components of the ISFSI or MRS, with emphasis upon (i) performance requirements, (ii) the bases, with technical justification therefor upon which such requirements have been established, and (iii) evaluations showing that safety functions will be accomplished.

(3) An analysis of the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed to meeting the requirements of which are applicable to the design, construction, or operation of the ISFSI or MRS.

§ 72.72 Material balance, inventory, and records requirements for stored materials.

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all spent fuel and high-level radioactive waste in storage. The records must include as a minimum the name of shipper of the material to the ISFSI or MRS, the estimated quantity of radioactive material per item (including special nuclear material in spent fuel), item identification and seal number, storage location, onsite movements of each fuel assembly or storage canister, and ultimate disposal. These records for spent fuel at an ISFSI or for spent fuel and high-level radioactive waste at an MRS must be

retained for as long as the material is stored and for a period of five years after the material is disposed of or transferred out of the ISFSI or MRS.

(b) Each licensee shall conduct a physical inventory of all spent fuel and high-level radioactive waste in storage at intervals not to exceed 12 months unless otherwise directed by the Commission. The licensee shall retain a copy of the current inventory as a record until the Commission terminates the license.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for material in storage. The licensee shall retain a copy of the current material control and accounting procedures until the Commission terminates the license.

(d) Records of spent fuel and high-level radioactive waste in storage must be kept in duplicate. The duplicate set of records must be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel transferred out of an ISFSI or of spent fuel or high-level radioactive waste transferred out of an MRS must be preserved for a period of five years after the date of transfer.

§ 72.74 Reports of accidental criticality or loss of special nuclear material.

(a) Each licensee shall notify the NRC Operations Center¹ within one hour of discovery of accidental criticality or any loss of special nuclear material.

¹Commercial telephone number of the NRC Operations Center is (301)951-0550.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or any other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) of this chapter applies to all telephonic reports required by this section.

(c) Reports required under § 73.71 of this chapter need not be duplicated under the requirements of this section.

§ 72.76 Material status reports.

(a) Except as provided in paragraph (b) of this section, each licensee shall complete and submit to the Commission (on DOE/NRC Form-742, Material Balance Report) material status reports in accordance with the printed instructions for completing the form. These reports must provide information concerning the special nuclear material contained in the spent fuel possessed, received, transferred, disposed of, or lost by the licensee. Material status reports must be made as of March 31 and September 30 of each year and filed within 30 days after the end of the period covered by the report. The Commission may, when good cause is shown, permit a licensee to submit material status reports at other times.

(b) Any licensee who is required to submit routine material status reports pursuant to § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.78 Nuclear material transfer reports.

(a) Except as provided in paragraph (b) of this section, whenever the licensee transfers or receives spent fuel, the licensee shall complete and distribute a Nuclear Material Transaction Report on DOE/NRC Form-741 in accordance with printed instructions for completing the form. Each ISFSI licensee who receives spent fuel from a foreign source shall complete both the supplier's and receiver's portion of DOE/NRC Form-741, verify the identity of the spent fuel, and indicate the results on the receiver's portion of the form.

(b) Any licensee who is required to submit inventory change reports on DOE/NRC Form-741 pursuant to § 75.34 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

§ 72.80 Other records and reports.

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules, regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission.

(c) Records that are required by the regulations in this part or by the license conditions must be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, the above records must be maintained until the Commission terminates the license.

(d) Any record that must be maintained pursuant to this part may be either the original or a reproduced copy by any state of the art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

§ 72.82 Inspections and tests.

(a) Each licensee under this part shall permit inspection by duly authorized representatives of the Commission of its records, premises, and activities and of spent fuel or high-level radioactive waste in its possession related to the specific license as may be necessary to effectuate the purposes of the Act, including section 105 of the Act.

(b) Each licensee under this part shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, packaging, or transfer of spent fuel or high-level radioactive waste.

(c)(1) Each licensee under this part shall upon request by the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the installation and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary, and transient NRC personnel and will be generally

commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other onsite space, is suggested as a guide. For sites containing multiple facilities, additional space may be requested to accommodate additional full-time inspectors. The office space that is provided shall be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator. All furniture, supplies and Commission equipment will be furnished by the Commission.

(3) Each licensee under this part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Administrator as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part.

(e) A report of the preoperational test acceptance criteria and test results must be submitted to the appropriate Regional Office specified in Appendix A of Part 73 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, at least 30 days prior to the receipt of spent fuel or high-level radioactive waste.

§ 72.84 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, as amended, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Atomic Energy Act for violation of Sections 53, 57, 62, 63, 81, or 82 of the Atomic Energy Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Atomic Energy Act. Any person who willfully violates any provision of the Atomic Energy Act, or any regulation or order issued thereunder, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

Subpart E - Siting Evaluation Factors

§ 72.90 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI or MRS must be investigated and assessed.

(b) Proposed sites for the ISFSI or MRS must be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI or MRS.

(c) Design basis external events must be determined for each combination of proposed site and proposed ISFSI or MRS design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI or MRS design shall be deemed unsuitable for the location of the ISFSI or MRS.

(e) Pursuant to Subpart A of Part 51 of this chapter for each proposed site for an ISFSI and pursuant to sections 141 or 148 of NHPA, as appropriate (96 Stat. 2241, __ Stat. ____, 42 U.S.C. 10161, __) for each proposed site for an MRS, the potential for radiological and other environmental impacts on the region must be evaluated with due consideration of the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility must be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

§ 72.92 Design basis external natural events.

(a) Natural phenomena that may exist or that can occur in the region of a proposed site must be identified and assessed according to their potential effects on the safe operation of the ISFSI or MRS. The important natural phenomena that affect the ISFSI or MRS design must be identified.

(b) Records of the occurrence and severity of those important natural phenomena must be collected for the region and evaluated for reliability, accuracy, and completeness. The applicant shall retain these records until the license is issued.

(c) Appropriate methods must be adopted for evaluating the design basis external natural events based on the characteristics of the region and the current state of knowledge about such events.

§ 72.94 Design basis external man-induced events.

(a) The region must be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI or MRS. The important potential man-induced events that affect the ISFSI or MRS design must be identified.

(b) Information concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods must be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

§ 72.96 Siting limitations.

(a) An ISFSI which is owned and operated by DOE must not be located at any site within which there is a candidate site for a HLW repository. This limitation shall apply until such time as DOE decides that such candidate site is no longer a candidate site under consideration for development as a HLW repository.

(b) An MRS must not be sited in any State in which there is located any site approved for site characterization for a HLW repository. This limitation shall apply until such time as DOE decides that the candidate site is no longer a candidate site under consideration for development as a repository. This limitation shall continue to apply to any site selected for construction as a repository.

(c) If an MRS is located, or is planned to be located, within 50 miles of the first HLW repository, any Commission decision approving the

first HLW repository application must limit the quantity of spent fuel or high-level radioactive waste that may be stored. This limitation shall prohibit the storage of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal, or a quantity of solidified high-level radioactive waste resulting from the reprocessing of such a quantity of spent fuel, in both the repository and the MRS until such time as a second repository is in operation.

(d) An MRS authorized by section 142(b) of NWPA may not be constructed in the State of Nevada. The quantity of spent nuclear fuel or high-level radioactive waste that may be stored at an MRS authorized by section 142(b) of NWPA shall be subject to the limitations in § 72.44(g) of this part instead of the limitations in paragraph (c) of this section.

§ 72.98 Identifying regions around an ISFSI or MRS site.

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI or MRS must be identified.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential measurable effects on the population or the environment from ISFSI or MRS activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to (1) the present and future character and the distribution of population, (2) consideration of present and projected future uses of land and water within

the region, and (3) any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

§ 72.100 Defining potential effects of the ISFSI or MRS on the region.

(a) The proposed site must be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site must be evaluated with respect to the effects on the regional environment resulting from construction, operation, and decommissioning for the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics must be taken into account.

§ 72.102 Geological and seismological characteristics.

(a)(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO, Charleston, SC, and Attica, NY, sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) For those sites that have been evaluated under paragraph (a)(1) of this section that are east of the Rocky Mountain Front, and that are

not in areas of known seismic activity, a standardized design earthquake (DE) described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific DE may be determined by using the criteria and level of investigations required by Appendix A of Part 100 of this chapter.

(b) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of Appendix A of Part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(c) Sites other than bedrock sites must be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(d) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(e) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(f) The design earthquake (DE) for use in the design of structures must be determined as follows:

(1) For sites that have been evaluated under the criteria of Appendix A of 10 CFR Part 100, the DE must be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(2) Regardless of the results of the investigations anywhere in the continental U.S., the DE must have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

§ 72.104 Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area must not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to (1) planned discharges of radioactive materials, radon and its decay products excepted, to the general environment, (2) direct radiation from ISFSI or MRS operations, and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions must be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations.

(c) Operational limits must be established for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations to meet the limits given in paragraph (a) of this section.

§ 72.106 Controlled area of an ISFSI or MRS.

(a) For each ISFSI or MRS site, a controlled area must be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to the whole body or any organ from any design basis accident. The minimum distance from the spent fuel or high-level radioactive waste handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

§ 72.108 Spent fuel or high-level radioactive waste transportation.

The proposed ISFSI or MRS must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel or high-level radioactive waste within the region.

Subpart F - General Design Criteria

§ 72.120 General considerations.

(a) Pursuant to the provisions of § 72.24, an application to store spent fuel in an ISFSI or to store spent fuel or high-level radioactive waste in an MRS must include the design criteria for the proposed storage installation. These design criteria establish the design, fabrication, construction, testing, maintenance and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this subpart establish minimum requirements for the design criteria for an ISFSI or MRS. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI or MRS.

(b) The MRS must be designed to store either spent fuel or solid high-level radioactive wastes. Liquid high-level radioactive wastes may not be received or stored in an MRS. If the MRS is a water-pool type facility, the solidified waste form shall be a durable solid with demonstrable leach resistance.

§ 72.122 Overall requirements.

(a) Quality Standards. Structures, systems, and components important to safety must be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) Protection against environmental conditions and natural phenomena.

(1) Structures, systems, and components important to safety must be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated with normal operation, maintenance, and testing of the ISFSI or MRS and to withstand postulated accidents.

(2) Structures, systems, and components important to safety must be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunamis, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components must reflect (i) appropriate consideration of the most severe of the natural phenomena reported for the site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and (ii) appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena. The ISFSI or MRS should also be designed to prevent massive collapse of building structures or the dropping of heavy objects as a result of building structural failure on to the spent fuel or high-level radioactive waste or on to structures, systems, and components important to safety.

(3) Capability must be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI or MRS is located over an aquifer which is a major water resource, measures must be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

(c) Protection against fires and explosions. Structures, systems, and components important to safety must be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-resistant materials must be used wherever practical throughout the ISFSI or MRS, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI or MRS must include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) Sharing of structures, systems, and components. Structures, systems, and components important to safety must not be shared between an ISFSI or MRS and other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) Proximity of sites. An ISFSI or MRS located near other nuclear facilities must be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) Testing and maintenance of systems and components. Systems and components that are important to safety must be designed to permit inspection, maintenance, and testing.

(g) Emergency capability. Structures, systems, and components important to safety must be designed for emergencies. The design must provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) Confinement barriers and systems.

(1) The spent fuel cladding must be protected during storage against degradation that leads to gross ruptures or the fuel must be otherwise confined such that degradation of the fuel during storage will not pose operational safety problems with respect to its removal from storage. This may be accomplished by canning of consolidated fuel rods or unconsolidated assemblies or other means as appropriate.

(2) For underwater storage of spent fuel or high-level radioactive waste in which the pool water serves as a shield and a confinement medium for radioactive materials, systems for maintaining water purity and the pool water level must be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design must preclude installations of drains,

permanently connected systems, and other features that could, by abnormal operations or failure, cause a significant loss of water. Pool water level equipment must be provided to alarm in a continuously manned location if the water level in the storage pools falls below a predetermined level.

(3) Ventilation systems and off-gas systems must be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(4) Storage confinement systems must have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions.

(5) The high-level radioactive waste must be packaged in a manner that allows handling and retrievability without the release of radioactive materials to the environment or radiation exposures in excess of Part 20 limits. The package must be designed to confine the high-level radioactive waste for the duration of the license.

(i) Instrumentation and control systems. Instrumentation and control systems must be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions must be identified in the Safety Analysis Report.

(j) Control room or control area. A control room or control area, if appropriate for the ISFSI or MRS design, must be designed to permit occupancy and actions to be taken to monitor the ISFSI or MRS safely under

normal conditions, and to provide safe control of the ISFSI or MRS under off-normal or accident conditions.

(k) Utility or other services.

(1) Each utility service system must be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety must include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services must be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions must be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

(4) An ISFSI or MRS which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with the other facility; however, the sharing of utilities and services or the physical connection must not significantly (i) increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or (ii) reduce the margin of safety as defined in the basis for any technical specifications of either facility.

(1) Retrievability. Storage systems must be designed to allow ready retrieval of spent fuel or high-level radioactive waste for further processing or disposal.

§ 72.124 Criteria for nuclear criticality safety.

(a) Design for criticality safety. Spent fuel handling, packaging, transfer, and storage systems must be designed to be maintained subcritical and to ensure that, before a nuclear criticality accident is possible, at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety. The design of handling, packaging, transfer, and storage systems must include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the data and methods used in calculations and demonstrate safety for the handling, packaging, transfer and storage conditions and in the nature of the immediate environment under accident conditions.

(b) Methods of criticality control. When practicable the design of an ISFSI or MRS must be based on favorable geometry, permanently fixed neutron absorbing materials (poisons), or both. Where solid neutron absorbing materials are used, the design shall provide for positive means to verify their continued efficacy.

(c) Criticality Monitoring. A criticality monitoring system shall be maintained in each area where special nuclear material is handled, used, or stored which will energize clearly audible alarm signals if accidental criticality occurs. Underwater monitoring is not required when special nuclear material is handled or stored beneath water shielding.

Monitoring of dry storage areas where special nuclear material is packaged in its stored configuration under a license issued under this subpart is not required.

§ 72.126 Criteria for radiological protection.

(a) Exposure control. Radiation protection systems must be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials. Structures, systems, and components for which operation, maintenance, and required inspections may involve occupational exposure must be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design must include means to:

- (1) Prevent the accumulation of radioactive material in those systems requiring access;
- (2) Decontaminate those systems to which access is required;
- (3) Control access to areas of potential contamination or high radiation within the ISFSI or MRS;
- (4) Measure and control contamination of areas requiring access;
- (5) Minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and
- (6) Shield personnel from radiation exposure.

(b) Radiological alarm systems. Radiological alarm systems must be provided in accessible work areas as appropriate to warn operating personnel of radiation and airborne radioactive material concentrations above a given setpoint and of concentrations of radioactive material in effluents above control limits. Radiation alarm systems must be designed with provisions for calibration and testing their operability.

(c) Effluent and direct radiation monitoring.

(1) As appropriate for the handling and storage system, effluent systems must be provided. Means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions must be provided for these systems. A means of measuring the flow of the diluting medium, either air or water, must also be provided.

(2) Areas containing radioactive materials must be provided with systems for measuring the direct radiation levels in and around these areas.

(d) Effluent control. The ISFSI or MRS must be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions. Analyses must be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limits given in § 72.104. Analyses of design basis accidents must be made to show that releases to the general environment will be within the exposure limits given in § 72.106. Systems designed to monitor the release of radioactive materials must have means for calibration and testing their operability.

§ 72.128 Criteria for spent fuel, high-level radioactive waste, and other radioactive waste storage and handling.

(a) Spent fuel and high-level radioactive waste storage and handling systems. Spent fuel storage, high-level radioactive waste storage, and other systems that might contain or handle radioactive materials associated with spent fuel or high-level radioactive waste, must be designed to ensure adequate safety under normal and accident conditions. These systems must be designed with (1) a capability to test and monitor components important to safety, (2) suitable shielding for radiation protection under normal and accident conditions, (3) confinement structures and systems, (4) a heat-removal capability having testability and reliability consistent with its importance to safety, and (5) means to minimize the quantity of radioactive wastes generated.

(b) Waste treatment. Radioactive waste treatment facilities must be provided. Provisions must be made for the packaging of site-generated low-level wastes in a form suitable for storage onsite awaiting transfer to disposal sites.

§ 72.130 Criteria for decommissioning.

The ISFSI or MRS must be designed for decommissioning. Provisions must be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI or MRS is permanently decommissioned.

Subpart G--Quality Assurance

§ 72.140 Quality assurance requirements.

(a) Purpose. This subpart describes quality assurance requirements applying to design, purchase, fabrication, handling, shipping, storing,

cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems, and components, and decommissioning that are important to safety. As used in this subpart, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to pre-determined requirements.

(b) Establishment of program. Each licensee² shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria of this subpart, and satisfying any specific provisions which are applicable to the licensee's activities. The licensee shall execute the applicable criteria in a graded approach to an extent that is commensurate with the importance to safety. The quality assurance program must cover the activities identified in § 72.24(n) throughout the life of the licensed activity, from the site selection through decommissioning, prior to termination of the license.

(c) Approval of program. Prior to receipt of spent fuel at the ISFSI or spent fuel and high-level radioactive waste at the MRS, each licensee shall obtain Commission approval of its quality assurance program. Each licensee shall file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and

²While the term "licensee" is used in these criteria, the requirements are applicable to whatever design, construction, fabrication, assembly, and testing is accomplished with respect to structures, systems, and components prior to the time a license is issued.

how they will be satisfied, with the Director, Office of Nuclear Material and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(d) Previously approved programs. A Commission-approved quality assurance program which satisfies the applicable criteria of Appendix B to Part 50 of this chapter and which is established, maintained, and executed with regard to an ISFSI will be accepted as satisfying the requirements of paragraph (b) of this section. Prior to first use, the licensee shall notify the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, of its intent to apply its previously approved Appendix B program to ISFSI activities. The licensee shall identify the program by date of submittal to the Commission, docket number, and date of Commission approval.

§ 72.142 Quality assurance organization.

The licensee shall be responsible for the establishment and execution of the quality assurance program. The licensee may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but shall retain responsibility for the program. The licensee shall clearly establish and delineate in writing the authority and duties of persons and organizations performing activities affecting the functions of structures, systems and components which are important to safety. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions. The quality assurance functions are (a) assuring that an appropriate quality assurance program is established and effectively executed and (b) verifying, by procedures such as checking, auditing, and inspection, that activities affecting the

functions that are important to safety have been correctly performed.

The persons and organizations performing quality assurance functions must have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The persons and organizations performing quality assurance functions shall report to a management level that ensures that the required authority and organizational freedom, including sufficient independence from cost and schedule considerations when these considerations are opposed to safety considerations, are provided.

Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this section are being performed must have direct access to the levels of management necessary to perform this function.

§ 72.144 Quality assurance program.

(a) The licensee shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this subpart. The licensee shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance

with these procedures throughout the period during which the ISFSI or MRS is licensed. The licensee shall identify the structures, systems, and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(b) The licensee, through its quality assurance program, shall provide control over activities affecting the quality of the identified structures, systems, and components to an extent commensurate with the importance to safety, and as necessary to ensure conformance to the approved design of each ISFSI or MRS. The licensee shall ensure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee shall take into account the need for special controls, processes, test equipment, tools and skills to attain the required quality and the need for verification of quality by inspection and test.

(c) The licensee shall base the requirements and procedures of its quality assurance program on the following considerations concerning the complexity and proposed use of the structures, systems, or components:

- (1) The impact of malfunction or failure of the item on safety;
- (2) The design and fabrication complexity or uniqueness of the item;
- (3) The need for special controls and surveillance over processes and equipment;

(4) The degree to which functional compliance can be demonstrated by inspection or test; and

(5) The quality history and degree of standardization of the item.

(d) The licensee shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to ensure that suitable proficiency is achieved and maintained. The licensee shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

§ 72.146 Design control.

(a) The licensee shall establish measures to ensure that applicable regulatory requirements and the design basis, as specified in the license application for those structures, systems, and components to which this section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to ensure that appropriate quality standards are specified and included in design documents and that deviations from standards are controlled. Measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the functions of the structures, systems, and components which are important to safety.

(b) The licensee shall establish measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures must include the establishment of

written procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews, alternate or simplified calculational methods, or by a suitable testing program. For the verifying or checking process, the licensee shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, the licensee shall include suitable qualification testing of a prototype or sample unit under the most adverse design conditions. The licensee shall apply design control measures to items such as the following: criticality physics, radiation, shielding, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; features to facilitate decontamination; and delineation of acceptance criteria for inspections and tests.

(c) The licensee shall subject design changes, including field changes, to design control measures commensurate with those applied to the original design. Changes in the conditions specified in the license require NRC approval.

§ 72.148 Procurement document control.

The licensee shall establish measures to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are included or referenced in the documents for procurement of material, equipment, and services, whether

purchased by the licensee or by its contractors or subcontractors. To the extent necessary, the licensee shall require contractors or subcontractors to provide a quality assurance program consistent with the applicable provisions of this subpart.

§ 72.150 Instructions, procedures, and drawings.

The licensee shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

§ 72.152 Document control.

The licensee shall establish measures to control the issuance of documents such as instructions, procedures, and drawings, including changes, which prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed. These measures must ensure that changes to documents are reviewed and approved.

§ 72.154 Control of purchased material, equipment, and services.

(a) The licensee shall establish measures to ensure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents.

These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.

(b) The licensee shall have available documentary evidence that material and equipment conform to the procurement specifications prior to installation or use of the material and equipment. The licensee shall retain or have available this documentary evidence for the life of ISFSI or MRS. The licensee shall ensure that the evidence is sufficient to identify the specific requirements met by the purchased material and equipment.

(c) The licensee or designee shall assess the effectiveness of the control of quality by contractors and subcontractors at intervals consistent with the importance, complexity, and quantity of the product or services.

§ 72.156 Identification and control of materials, parts, and components.

The licensee shall establish measures for the identification and control of materials, parts, and components. These measures must ensure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item as required, throughout fabrication, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective materials, parts, and components.

§ 72.158 Control of special processes.

The licensee shall establish measures to ensure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

§ 72.160 Licensee inspection.

The licensee shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or products processed must be performed for each work operation where necessary to assure quality. If direct inspection of processed material or products cannot be carried out, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when quality control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the licensee's designated representative and beyond which work should not proceed without the consent of its designated representative, are required, the specific hold points must be indicated in appropriate documents.

§ 72.162 Test control.

The licensee shall establish a test program to ensure that all testing required to demonstrate that the structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures that incorporate the requirements of this part and the requirements and acceptance limits contained in the ISFSI or MRS license. The test procedures must include provisions for assuring that all prerequisites for the given test are met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. The licensee shall document and evaluate the test results to ensure that test requirements have been satisfied.

§ 72.164 Control of measuring and test equipment.

The licensee shall establish measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

§ 72.166 Handling, storage, and shipping control.

The licensee shall establish measures to control, in accordance with work and inspection instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, and specific moisture content and temperature levels must be specified and provided.

§ 72.168 Inspection, test, and operating status.

(a) The licensee shall establish measures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the ISFSI or MRS. These measures must provide for the identification of items which have satisfactorily passed required inspections and tests where necessary to preclude inadvertent bypassing of the inspections and tests.

(b) The licensee shall establish measures to identify the operating status of structures, systems, and components of the ISFSI or MRS, such as tagging valves and switches, to prevent inadvertent operation.

§ 72.170 Nonconforming materials, parts, or components.

The licensee shall establish measures to control materials, parts, or components that do not conform to the licensee's requirements in order to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

§ 72.172 Corrective action.

The licensee shall establish measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures must ensure that the cause of the condition is

determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

§ 72.174 Quality assurance records.

The licensee shall maintain sufficient records to furnish evidence of activities affecting quality. The records must include the following: design records, records of use and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records must include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records must, at a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any noted deficiencies. Records must be identifiable and retrievable. Records pertaining to the design, fabrication, erection, testing, maintenance, and use of structures, systems, and components important to safety shall be maintained by or under the control of the licensee until the Commission terminates the license.

§ 72.176 Audits.

The licensee shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the

areas being audited. Audited results must be documented and reviewed by management having responsibility in the area audited. Follow-up action, including re-audit of deficient areas, must be taken where indicated.

Subpart H--Physical Protection

§ 72.180 Physical security plan.

The licensee shall establish a detailed plan for security measures for physical protection. The licensee shall retain a copy of the current plan as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the plan is superseded, retain the superseded material for three years after each change. This plan must consist of two parts. Part I must demonstrate how the applicant plans to comply with the applicable requirements of Part 73 of this chapter and during transportation to and from the proposed ISFSI or MRS and must include the design for physical protection and the licensee's safeguards contingency plan and guard training plan. Part II must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

§ 72.182 Design for physical protection.

The design for physical protection must show the site layout and the design features provided to protect the ISFSI or MRS from sabotage. It must include:

(a) The design criteria for the physical protection of the proposed ISFSI or MRS;

(b) The design bases and the relation of the design bases to the design criteria submitted pursuant to paragraph (a) of this section; and

(c) Information relative to materials of construction, equipment, general arrangement, and proposed quality assurance program sufficient to provide reasonable assurance that the final security system will conform to the design bases for the principal design criteria submitted pursuant to paragraph (a) of this section.

§ 72.184 Safeguards contingency plan.

(a) The requirements of the licensee's safeguards contingency plan for dealing with threats and radiological sabotage must be as defined in § 73.40(b) of this chapter. This plan must include Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix, the first four categories of information relating to nuclear facilities licensed under Part 50 of this chapter. (The fifth category of information, Procedures, does not have to be submitted for approval.)

(b) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C to 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the licensee's safeguards contingency plan. The licensee shall retain a copy of the current procedures as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

§ 72.186 Change to physical security and safeguards contingency plans.

(a) The licensee shall make no change that would decrease the safeguards effectiveness of the physical security plan, guard training plan or the first four categories of information (Background, Generic Planning

Base, Licensee Planning Base, and Responsibility Matrix) contained in the licensee safeguards contingency plan without prior approval of the Commission. A licensee desiring to make a change must submit an application for a license amendment pursuant to § 72.56.

(b) The licensee may, without prior Commission approval, make changes to the physical security plan, guard training plan, or the safeguards contingency plan, if the changes do not decrease the safeguards effectiveness of these plans. The licensee shall maintain records of changes to any such plan made without prior approval for a period of three years from the date of the change and shall furnish to the Regional Administrator of the appropriate NRC Regional Office specified in Appendix A of Part 73 of this chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report containing a description of each change within two months after the change is made.

Subpart I--Training and Certification of Personnel

§ 72.190 Operator requirements.

Operation of equipment and controls that have been identified as important to safety in the Safety Analysis Report and in the license must be limited to trained and certified personnel or be under the direct visual supervision of an individual with training and certification in the operation. Supervisory personnel who personally direct the operation of equipment and controls that are important to safety must also be certified in such operations.

§ 72.192 Operator training and certification program.

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI or MRS personnel. This program must be submitted to the Commission for approval with the license application.

§ 72.194 Physical requirements.

The physical condition and the general health of personnel certified for the operation of equipment and controls that are important to safety must not be such as might cause operational errors that could endanger other in-plant personnel or the public health and safety. Any condition that might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, if appropriate provisions are made to accommodate such defect.

Subpart J--Provision of MRS Information to State Governments
and Indian Tribes

§ 72.200 Provision of MRS information.

(a) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee shall provide to the Governor and legislature of any State in which an MRS authorized under the Nuclear Waste Policy Act of 1982, as amended, is or may be located, to the Governors of any contiguous States, to each affected unit of local government and to the governing body of any affected Indian tribe, timely and complete information regarding determinations or plans made by the Commission with respect

to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility.

(b) Notwithstanding paragraph (a) of this section, the Director or the Director's designee is not required to distribute any document to any entity if, with respect to such document, that entity or its counsel is included on a service list prepared pursuant to Part 2 of this chapter.

(c) Copies of all communications by the Director or the Director's designee under this section shall be placed in the Commission's Public Document Room and shall be furnished to DOE.

§ 72.202 Participation in license reviews.

State and local governments and affected Indian tribes may participate in license reviews as provided in Subpart G of Part 2 of this chapter.

§ 72.204 Notice to States.

If the Governor and legislature of a State have jointly designated on their behalf a single person or entity to receive notice and information from the Commission under this part, the Commission will provide such notice and information to the jointly designated person or entity instead of the Governor and the legislature separately.

§ 72.206 Representation.

Any person who acts under this subpart as a representative for a State (or for the Governor or legislature thereof) or for an affected Indian tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in such representative capacity.

The following conforming amendments are also made to other parts of the Commission's regulations in Chapter 1, Title 10 of the Code of Federal Regulations.

PART 2 - RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

2. The authority citation for Part 2 is revised to read as follows:
 Authority: Secs. 161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87-615, 76 Stat. 409 (42 U.S.C. 2241); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552.

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 105, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871). Sections 2.102, 2.103, 2.104, 2.105, 2.721 also issued under secs. 102, 103, 104, 105, 183, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Sections 2.200-2.206 also issued under secs. 186, 234, 68 Stat. 955, 83 Stat. 444, as amended (42 U.S.C. 2236, 2282); sec. 206, 88 Stat. 1246 (42 U.S.C. 5846). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 as amended (42 U.S.C. 4332). Sections 2.700a, 2.719 also issued under 5 U.S.C. 544. Sections 2.754, 2.760, 2.770 also issued under 5 U.S.C. 557. Section 2.764 and Table 1A of Appendix C also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.800 and 2.808 also issued under 5 U.S.C. 553.

Section 2.809 also issued under 5 U.S.C. 553 and sec. 29, Pub. L. 85-256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Appendix A also issued under sec. 6, Pub. L. 91-560, 84 Stat. 1473 (42 U.S.C. 2135). Appendix B also issued under sec. 10, Pub. L. 99-240, 99 Stat. 1859 (42 U.S.C. 2021j).

3. In § 2.104, paragraph (e) is revised to read as follows:

§ 2.104 Notice of hearing.

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(e) The Secretary will give timely notice of the hearing to all parties and to other persons, if any, entitled by law to notice. The Secretary will transmit a notice of hearing on an application for a license for a production or utilization facility, for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, for a license under Part 61 of this chapter, for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter, and for a license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) to the governor or other appropriate official of the State and to the chief executive of the municipality in which the facility is to be located or the activity is to be conducted or, if the facility is not to be located or the activity conducted within a municipality, to the chief executive of the county (or to the Tribal organization, if it is to be so located or conducted

within an Indian reservation). The Secretary will transmit a notice of hearing on an application for a license under Part 72 of this chapter to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS) to the same persons who received the notice of docketing under § 72.16(e) of this chapter.

4. In § 2.105, paragraph (a) is amended by deleting the word "or" at the end of paragraph (6), by redesignating paragraphs (7), (8) and (9) as paragraphs (9), (10) and (11) and by adding new paragraphs (7) and (8) to read as follows:

§ 2.105 Notice of proposed action.

(a) * * *

(7) A license under Part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) or to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS);

(8) An amendment to a license specified in paragraph (a)(7) of this section when such an amendment presents a genuine issue as to whether the health and safety of the public will be significantly affected; or

* * * * *

5. In § 2.764, paragraph (c) is revised to read as follows:

§ 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.

* * * * *

(c) An initial decision directing the issuance of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) under 10 CFR Part 72 shall become effective only upon order of the Commission. The Director of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) under 10 CFR Part 72 until expressly authorized to do so by the Commission.

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6. In Appendix C, Table 1A, is revised to read as follows:

Appendix C - General Statement of Policy and Procedure for NRC
Enforcement Actions

* * * * *

Table 1A -- Base Civil Penalties

	Plant Operations, construc- tion, health physics and and EP	Safeguards	Transportation	
			Greater than Type A quantity ¹	Type A quantity or less ²
a. Power reactors	\$100,000	\$100,000	\$100,000	\$5,000
b. Test reactors	10,000	10,000	10,000	2,000
c. Research reactors and critical facilities	5,000	5,000	5,000	1,000
d. Fuel fabricators and industrial processors ³	25,000	100,000 ⁴	25,000	5,000
e. Mills and uranium conversion facilities	10,000	--	5,000	2,000
f. Industrial users of material ⁵	10,000	--	5,000	2,000
g. Waste disposal licensees	10,000	--	5,000	2,000
h. Academic or medical institutions ⁶	5,000	--	2,500	1,000
i. Independent spent fuel and monitored retrievable storage installations	25,000	100,000	25,000	5,000
j. Other material licensees	1,000	--	2,500	1,000

¹Includes irradiated fuel, high level waste, unirradiated fissile material and any other quantities requiring Type B packaging.

²Includes low specific activity waste (LSA), low level waste, Type A packages, and excepted quantities and articles.

³Large firms engaged in manufacturing (or distribution of byproduct, source, or special nuclear material).

⁴This amount refers to Category 1 licensees (or defined in 10 CFR 73.2(bb)). Licensed fuel fabricators not authorized to possess Category 1 material have a base penalty amount of \$50,000.

⁵Includes industrial radiographers, nuclear pharmacies, and other industrial users.

⁶This applies to nonprofit institutions not otherwise categorized under sections "a" through "g" in this table.

PART 19 - NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

7. The authority citation for Part 19 is revised to read as follows:

Authority: Secs. 53, 63, 81, 103, 104, 161, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2093, 2111, 2133, 2134, 2201, 2236, 2282); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841). Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 19.11(a), (c), (d), and (e) and 19.12 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 19.13 and 19.14(a) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

8. Section 19.2 is revised to read as follows:

§ 19.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed by the Nuclear Regulatory Commission pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

9. In § 19.3, paragraph (d) is revised to read as follows:

§ 19.3 Definitions.

* * * * *

(d) "License" means a license issued under the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including licenses to operate a production or utilization facility pursuant to Part 50 of this chapter. "Licensee" means the holder of such a license.

* * * * *

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

10. The authority citation for Part 20 is revised to read as follows:

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 68 Stat. 930, 933, 935, 936, 937, 948, as amended (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 20.408 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended, (42 U.S.C. 2273), §§ 20.101, 20.102, 20.103(a), (b), and (f), 20.104(a) and (b), 20.105(b), 20.106(a), 20.201, 20.202(a), 20.205, 20.207, 20.301, 20.303, 20.304, and 20.305 are issued under sec. 161b, 68 Stat. 948, as amended, (42 U.S.C. 2201(b)); and §§ 20.102, 20.103(e), 20.401-20.407, 20.408(b) and 20.409 are issued under sec. 161o, 68 Stat. 950, as amended, (42 U.S.C. 2201(o)).

11. Section 20.2 is revised to read as follows:

§ 20.2 Scope.

The regulations in this part apply to all persons who receive, possess, use, or transfer material licensed pursuant to the regulations in Parts 30 through 35, 39, 40, 60, 61, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility pursuant to Part 50 of this chapter.

12. In § 20.408, paragraph (a)(5) is revised to read as follows:

§ 20.408 Reports of personnel monitoring on termination of employment or work.

(a) This section applies to each person licensed by the Commission to:

* * * * *

(5) Possess spent fuel in an independent spent fuel storage installation (ISFSI) or possess spent fuel or high level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter; or

* * * * *

PART 21 - REPORTING OF DEFECTS AND NONCOMPLIANCE

13. The authority citation for Part 21 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 234, 83 Stat 444, as amended, (42 U.S.C. 2201, 2282); secs. 201, as amended, 206, 88 Stat 1242, as amended, 1246 (42 U.S.C. 5841, 5846).

Sec. 21.2 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 21.6, 21.21(a) and 21.31 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 21.21, 21.41 and 21.51 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

14. Section 21.2 is revised to read as follows:

§ 21.2 Scope.

The regulations in this part apply, except as specifically provided otherwise in Parts 31, 34, 35, 39, 40, 60, 61, 70, or 72 of this chapter, to each individual, partnership, corporation, or other entity licensed pursuant to the regulations in this chapter to possess, use, and/or transfer within the United States source material, byproduct material, special nuclear material, and/or spent fuel and high-level radioactive waste, or to construct, manufacture, possess, own, operate and/or transfer within the United States, any production or utilization facility, or independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS), and to each director (see § 21.3(f)) and responsible officer (see § 21.3(j)) of such a licensee. The regulations in this part apply also to each individual, corporation, partnership or other entity doing business within the United States, and each director and responsible officer of such organization that constructs (see § 21.3(c)) a production or utilization facility licensed for manufacture, construction or operation (see § 21.3(h)) pursuant to Part 50 of this chapter, an independent spent fuel storage installation (ISFSI) for the storage of spent fuel licensed pursuant to

Part 72 of this chapter or a monitored retrievable storage installation (MRS) for the storage of spent fuel or high-level radioactive waste licensed pursuant to Part 72 of this chapter, or supplies (see § 21.3(1)) basic components (see § 21.3(a)) for a facility or activity licensed, other than for export, under Parts 30, 39, 40, 50, 60, 61, 70, 71, or 72 of this chapter. Nothing in these regulations should be deemed to preclude either an individual or a manufacturer/supplier of a commercial grade item (see § 21.3(a-1)) not subject to the regulations in this part from reporting to the Commission a known or suspected defect or failure to comply and, as authorized by law, the identity of anyone so reporting will be withheld from disclosure.¹

PART 51 - ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC
LICENSING AND RELATED REGULATORY FUNCTIONS

15. The authority citation for Part 51 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended (42 U.S.C. 2201); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

¹NRC Regional Offices will accept collect telephone calls from individuals who wish to speak to NRC representatives concerning nuclear safety-related problems. The location and telephone numbers (for nights and holidays as well as regular hours) are listed below:

Region:

I	(Philadelphia)	(215) 337-5000
II	(Atlanta)	(404) 331-4503
III	(Chicago)	(312) 790-5500
IV	(Dallas)	(817) 860-8100
IV	Uranium Recovery Field Office (Denver). .	(303) 236-2805
V	(San Francisco)	(415) 943-3700

Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041. Sections 51.20, 51.30, 51.60, 51.61, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100-203, ___ Stat. ___ (42 U.S.C. 10155, 10161). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021).

16. In § 51.20, paragraphs (b)(9) and (b)(10) are revised to read as follows:

§ 51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements.

* * * * *

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

* * * * *

(9) Issuance of a license pursuant to Part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor, or for the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS).

(10) Issuance of a license amendment authorizing the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

17. In § 51.30, a new paragraph (c) is added to read as follows:

§ 51.30 Environmental assessment.

* * * * *

(c) An environmental assessment for a proposed action regarding a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the Nuclear Waste Policy Act of 1982 (96 Stat. 2242).

18. In § 51.60, paragraphs (a), (b)(1)(iii) and (b)(4) are revised to read as follows:

§ 51.60 Environmental report - materials licenses.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to Parts 30, 32, 33, 34, 35, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1)-(b)(6) of this section, shall submit with its application to the Director of Nuclear Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document, entitled "Applicant's Environmental Report" or "Supplement to Applicant's Environmental Report," as appropriate. The "Applicant's Environmental Report" shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted

to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

(b) * * *

(1) * * *

(iii) Storage of spent fuel in an independent spent fuel storage installation (ISFSI) or the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

(4) Amendment of a license to authorize the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter.

* * * * *

19. Section 51.61 is revised to read as follows:

§ 51.61 Environmental report - independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to Part 72 of this chapter shall submit with its application to the Director of Nuclear

Material Safety and Safeguards the number of copies, as specified in § 51.66, of a separate document entitled "Applicant's Environmental Report - ISFSI License" or "Applicant's Environmental Report - MRS License," as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in Subpart E of Part 72 of this chapter. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), no discussion of the environmental impact of the storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required in an environmental report submitted by an applicant for an initial license for storage of spent fuel in an ISFSI, or any amendment thereto.

20. In § 51.80, paragraph (b) is revised to read as follows:
 § 51.80 Draft environmental impact statement - materials license.

* * * * *

(b)(1) Independent spent fuel storage installation (ISFSI). Unless otherwise determined by the Commission and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a draft environmental impact statement on the issuance of an initial license for storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel only for the term of the license or amendment applied for.

(2) Monitored retrievable storage installation (MRS). As provided in sections 141(c), (d), and (e) and 148(a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPAA) (96 Stat. 2242, 2243); __ Stat. __ a draft environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

21. In § 51.97, a new paragraph (b) is added to read as follows:
 § 51.97 Final environmental impact statement - materials license.

* * * * *

(b) Monitored retrievable storage facility (MRS). As provided in sections 141(c), (d), and (e) and 148(a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPAA) (96 Stat. 2242, 2243); __ Stat. __) a final environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPAA (96 Stat. 2242) but may consider alternative facility designs which are consistent with these design criteria.

22. The references to §§ 72.11, 72.20 and 72.31(b) in the second sentence of paragraph (a)(2) of § 51.101 are redesignated respectively as §§ 72.16, 72.34 and 72.40(b).

PART 70 - DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

23. The authority citation for Part 70 is revised to read as follows:

Authority: Sections 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 70.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.62 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 70.3, 70.19(c), 70.21(c), 70.22(a), (b), (d)-(k), 70.24 (a) and (b), 70.32 (a)(3), (5) and (6), (d), and (i), 70.36, 70.39 (b) and (c), 70.41(a), 70.42(a) and (c), 70.56, 70.57 (b), (c), and (d), 70.58 (a)-(g)(3), and (h)-(j) are issued under sec. 161b, 68 Stat. 948 as amended (42 U.S.C. 2201(b)); §§ 70.7, 70.20a (a) and (d), 70.20b (c) and (e), 70.21(c), 70.24(b), 70.32(a)(6), (c), (d), (e), and (g), 70.36, 70.51(c)-(g), 70.56, 70.57(b) and (d), 70.58 (a)-(g)(3) and (h)-(j) are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and

§§ 70.20b (d) and (e), 70.38, 70.51(b) and (i), 70.52, 70.53, 70.54, 70.55, 70.58(g)(4), (k) and (l), 70.59, and 70.60(b) and (c) are issued under sec. 161o, 68 Stat 950, as amended (42 U.S.C. 2201(o)).

24. In § 70.1, paragraph (c) is revised to read as follows:

§ 70.1 Purpose.

* * * * *

(c) The regulations in Part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess (1) spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI), or (2) spent fuel, high-level radioactive waste, and other radioactive materials associated with the storage in a monitored retrievable storage installation (MRS), and the terms and conditions under which the Commission will issue such licenses.

25. In § 70.20a, paragraph (b) is revised to read as follows:

§ 70.20a General license to possess special nuclear material for transport.

* * * * *

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to Parts 30 through 35, 39, 40, 50, 72, 110, or other sections of this part.

* * * * *

PART 73 - PHYSICAL PROTECTION OF PLANTS AND MATERIALS

26. The authority citation for Part 73 is revised to read as follows:

Authority: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); secs. 201, as amended, 204, 88 Stat. 1242, as amended, 1245 (42 U.S.C. 5841, 5844).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Sec. 73.37(f) also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876 (42 U.S.C. 2169).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), §§ 73.21, 73.37(g) and 73.55 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 73.20, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, 73.57, and 73.67 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 73.20(c)(1), 73.24(b)(1), 73.26(b)(3), (h)(6), and (k)(4), 73.27(a) and (b), 73.37(f), 73.40(b) and (d), 73.46(g)(6) and (h)(2), 73.50(g)(2), (3)(iii)(B) and (h), 73.55(h)(2), and (4)(iii)(B), 73.57, 73.70, 73.71 and 73.72 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

27. In § 73.1, paragraph (b)(6) is revised to read as follows:
§ 73.1 Purpose and scope.

* * * * *

(b) * * *

(6) This part prescribes requirements for the physical protection of spent fuel stored in either an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) licensed under Part 72 of this chapter.

* * * * *

PART 75 - SAFEGUARDS ON NUCLEAR MATERIAL - IMPLEMENTATION OF US/IAEA AGREEMENT

28. The authority citation for Part 75 is revised to read as follows:

Authority: Secs. 53, 63, 103, 104, 122, 161, 68 Stat. 930, 932, 936, 937, 939, 948, as amended (42 U.S.C. 2073, 2093, 2133, 2134, 2152, 2201); sec. 201, as amended, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Section 75.4 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), the provisions of this part are issued under sec. 1610, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

29. In § 75.4, paragraph (k)(4) is revised to read as follows:
§ 75.4 Definitions.

As used in this part:

* * * * *

(k) "Installation" means:

* * * * *

(4) An independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) as defined in § 72.3 of this chapter; or

* * * * *

PART 150 - EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY
IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER
SECTION 274

30. The authority citation for Part 150 is revised to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 274, 73 Stat. 688, as amended (42 U.S.C. 2201, 2201); sec. 201, as amended, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Sections 150.3, 150.15, 150.15a 150.31, 150.32 also issued under secs. 11e(2), 81, 68 Stat. 923, 935, as amended, secs. 83, 84, 92 Stat. 3033, 3039 (42 U.S.C. 2014e(2), 2111, 2113, 2114). Section 150.14 also issued under sec. 53, 68 Stat. 930, as amended (42 U.S.C. 2073). Section 150.15 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 150.30 also issued under sec. 234, 83 Stat. 444 (42 U.S.C. 2282).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 150.20(b)(2)-(4) and 150.21 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); § 150.14 is issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 150.16-150.19 and 150.20(b)(1) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

31. In § 150.15, paragraph (a)(7) is revised to read as follows:

§ 150.15 Persons not exempt.

(a) * * *

(7) The storage of (i) spent fuel in an independent spent fuel storage installation (ISFSI) or (ii) spent fuel and high level radioactive waste in a monitored retrievable storage installation (MRS) licensed pursuant to Part 72 of this chapter.

* * * * *

Dated at Rockville, Maryland, this ____ day of _____, 1988.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,
Secretary of the Commission.

REGULATORY ANALYSIS
For Revision of 10 CFR Part 72

1. Statement of the Problem

On November 12, 1980, 10 CFR Part 72, "Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation (ISFSI)," was published in the Federal Register (45 FR 74693) as a final rule. This regulation established requirements, procedures, and criteria for the issuance of licenses to possess power reactor spent fuel in an ISFSI. On January 7, 1983, the Nuclear Waste Policy Act of 1982 (NWPAA) was signed into law (Public Law 97-425). On December 22, 1987, NWPAA was amended by the Nuclear Waste Policy Amendments Act of 1987 (Public Law 100-203, Title V, Subtitle A). The NWPAA, among other things, provides for the full utilization of available spent nuclear fuel pools at the site of each civilian nuclear power reactor to the extent practical, the addition of new spent fuel storage capacity where practical at the site of such reactor for interim storage of spent fuel; the establishment of a Federally owned and operated system for the interim storage of spent nuclear fuel at one or more facilities owned by the Federal Government (with not more than 1,900 metric tons of additional capacity) to prevent disruptions in the orderly operation of any civilian nuclear power plant that cannot reasonably provide adequate spent fuel storage capacity at the site of such reactor when needed. Under Section 142(b) of NWPAA, the Secretary of the Department of Energy is authorized to site, construct and operate one MRS. NWPAA also established procedures which a State or an Indian tribe may use to negotiate an agreement with the Federal Government under which the State or Indian tribe would agree to host an MRS within the State or reservation. Following enactment of legislation to implement a negotiated agreement, the Secretary of the Department of Energy could proceed to evaluate appropriate sites. Under the law, DOE is required to obtain an NRC license both for the MRS authorized by Section 142(b) of NWPAA and for any MRS authorized by Congress pursuant to a negotiated agreement.

Section 135 of the NWPAA requires that storage capacity provided by the Department of Energy for the interim storage of spent fuel be licensed by the Commission, except for those facilities that were owned by the Federal Government on the date of enactment of the NWPAA (January 7, 1983). Eligibility for the use of government interim storage facilities will be determined by the Commission in accordance with the procedures and criteria contained in 10 CFR Parts 1 and 53. The use of modular or mobile spent fuel storage equipment, or the construction of storage capacity at any site of a civilian nuclear power reactor by the Federal government will require licensing by the Commission. Sections 141 and 148 of the NWPAA provide that a monitored retrievable storage installation shall be subject to licensing by the Commission. Additions to Part 72 are necessary to incorporate this, and other, requirements of NWPAA.

Changes in Part 72 are also desirable to clarify issues concerning general design criteria, emergency planning, and quality assurance since it was made effective on 11/28/80.

2. Objective

To promulgate regulations incorporating the provisions of Subtitles B and C of the Nuclear Waste Policy Act of 1982, as amended, and other changes resulting from licensing experience since Part 72 was made effective (11/28/80).

3. Alternatives

The alternatives considered in developing this rulemaking action are as follows:

3.1 No action

The Nuclear Waste Policy Act of 1982, as amended, mandates that the Commission license certain activities related to storage of spent nuclear fuel and high-level radioactive waste. Regulations covering some of these activities are not in place, thus, rulemaking action is necessary.

3.2 Procedural alternatives

Procedural alternatives considered are amendment of licenses, use of regulatory guides only, and amendment of regulations and preparation of regulatory guides. A major purpose of this rulemaking is to incorporate licensing of storage of spent nuclear fuel and high-level radioactive waste in a monitored retrievable storage facility (MRS) owned and operated by the Department of Energy (DOE). No license has been issued to DOE for an MRS, thus, amendment of licenses is not an appropriate alternative. Regulatory guides do not carry the force of law, so this alternative is not appropriate. Amendment of regulations is the preferred action. The Commission could amend its regulations by adding a new part to provide a regulatory framework for licensing MRS. However, such a procedure would duplicate a large part of the regulations in 10 CFR Part 72. The technical and procedural requirements of Part 72 are generally applicable to an MRS. To ensure consistency and to avoid unnecessary duplication of regulations the preferred course of action is revision of Part 72. Regulatory guides, concerning specific requirements in the proposed rule, are planned to be issued for public comment following publication of the proposed rule in the Federal Register.

3.3 Timing alternatives

The Commission could await further development of the MRS option before initiating a rulemaking proceeding. However, since Congress has already authorized the Department of Energy to site, construct and operate one MRS, this approach is not recommended. Moreover, such an approach could result in unnecessary delay in promulgating an effective rule for use in reviewing a license application. On May 27, 1986, in order to ensure timely development of these regulations and to provide an opportunity for public comment, the Commission published a proposed rule (51 FR 19106) revising 10 CFR Part 72. After considering the 1987 amendments to the Nuclear Waste Policy Act and the public comments submitted in response to its notice of proposed rulemaking, the Commission has chosen to promulgate revised Part 72 as an effective rule.

4. Consequences

The existing 10 CFR Part 72 was written to provide regulatory requirements for licensing spent fuel storage independent of a nuclear power plant's spent fuel pool or in an ISFSI constructed for this purpose. Under the provisions of NWPA, DOE will be subject to the NRC licensing process. Additions are needed to incorporate the specific issues which have been raised by the NWPA. The basic requirements for the storage of spent fuel in an ISFSI are not being changed. Requirements are being added which cover the storage of spent fuel and high-level radioactive waste in an MRS. Promulgation of the proposed revision of Part 72 as an effective rule would enable the staff to carry out the NRC's responsibilities in a more efficient and effective manner.

5. Decision Rationale

Sections 141 and 148 of the NWPA require that the Nuclear Regulatory Commission license a monitored retrievable storage installation (MRS) authorized by Congress. Based on this statutory requirement, the Commission should proceed to complete the rulemaking proceeding initiated by publishing proposed 10 CFR Part 72, and related conforming amendments for public comment.

6. Implementation

Under Section 142(b) of NWPA, the Secretary of the Department of Energy is authorized to site, construct and operate one MRS. Under Section 148, DOE is required to obtain an NRC license for the MRS. The NWPA also requires DOE to obtain an NRC license for an MRS authorized by Congress pursuant to a negotiated agreement (see NWPA, Sections 403(d)(4) and 405(b)(2).) In order to ensure that the Commission has the necessary rules in place when needed, the Commission is promulgating the final rule now.