



November 29, 1993

RULEMAKING ISSUE
(Notation Vote)

SECY-93-323

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: WITHDRAWAL OF PROPOSED RULEMAKING TO ESTABLISH PROCEDURES
AND CRITERIA FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE
WASTE AFTER JANUARY 1, 1996

PURPOSE:

To inform the Commission of the public comments received in response to the proposed rulemaking to establish procedures and criteria for on-site storage of low-level radioactive waste (LLW) after January 1, 1996, and the staff's analysis of these comments, and to obtain the Commission's approval to withdraw this proposed rulemaking.

SUMMARY:

The proposed amendments, to 10 CFR Parts 30, 40, 50, 70, and 72, to establish a regulatory framework containing the procedures and criteria applicable to on-site storage of LLW after January 1, 1996, have two objectives: (1) to support the goals of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPA); and (2) to reduce the reliance on on-site storage, because of associated concerns with the protection of the public health and safety. After considering the comments submitted on the proposed rule, the staff does not believe that the proposed rule will achieve either objective. The staff does not believe that there is a sufficient connection between the requirements in the rule for documenting that a licensee has exhausted reasonable disposal options and the objective of reducing on-site storage of

Contact: Robert A. Nelson, NMSS
504-2004

LLW or encouraging the development of new LLW disposal capacity. The few comments received in support of the rule were based on the general desirability of encouraging disposal over storage. However, these commenters did not address the issue of whether the documentation procedures in the rule would prove to be an effective method for achieving this goal. After further analysis of the rationale for the rule, prompted by the public comments, it is not clear that this rule would provide licensees a substantially greater incentive over existing requirements to dispose of their LLW at available locations in a timely manner. Therefore, the proposed rule would not be a necessary or significant addition to the protection of the public health and safety. In a memorandum to the Commission dated April 23, 1993, "Strategies and Options for Encouraging the States and Compacts to Develop New Low-Level Radioactive Waste Disposal Facilities," (Options Paper) the staff examined the factors that have impacted the development of new LLW disposal facilities and presented a wide-ranging evaluation of potential options that may be available to the Commission to encourage the development of these facilities. These options could be considered as alternatives to this proposed rulemaking.

A summary of the public comments received in response to this proposed rulemaking and the staff's responses to those comments are provided as Enclosure 1 to this paper.

BACKGROUND:

In a Staff Requirements Memorandum (SRM) dated January 30, 1992, the Commission directed the staff to develop a proposed rule that would establish a regulatory framework containing the procedures and criteria applicable to the on-site storage of LLW beyond January 1, 1996. The SRM included the amendatory text and requirements for the proposed rulemaking and directed the staff to coordinate the draft proposed rule with the Agreement States. The Agreement States were informed of the proposed rulemaking, by letter dated February 7, 1992. Draft supplementary information was forwarded to the Agreement States on February 14, 1992, at which time the Agreement States were asked to provide comments. Fourteen Agreement States and one compact commission responded to the staff's request for comments. Only one Agreement State supported the rulemaking. The other responding Agreement States either opposed it, suggested it be delayed, or did not state a position.

A proposed rulemaking package was forwarded to the Commission on May 8, 1992 (SECY-92-168). Under the provisions of the May 8, 1992, draft proposed rule, on-site storage of LLW would not have been permitted after January 1, 1996 (other than reasonable short-term storage necessary for decay, or for collection or consolidation for shipment off-site, in the case where the licensee has access to an operating LLW disposal facility), unless the licensee could have documented that it had exhausted other reasonable waste management options. These options included the management of the waste by the State in which the waste generator is located. The amended regulations, as originally drafted, would have required the licensee to request that the State take title to, and possession of, the waste, pursuant to the LLRWPA. Another option was that the licensee contract, either directly or through the State, for the disposal of its waste. In addition, reactor licensees would have to document that on-site storage activities would be consistent with, and not

compromise, the safe operation of the licensee's activities, and not decrease the level of safety provided by applicable regulatory requirements. The text of the proposed rule is provided as Enclosure 2, for ease of reference.

On June 19, 1992, the U.S Supreme Court (Supreme Court) issued its decision in New York v. United States, regarding the constitutionality of the LLRWPA. The Supreme Court decided that the take-title provision of the LLRWPA, which was to take effect on January 1, 1996, is unconstitutional, as applied to non-compact States such as New York, but severable from the remainder of the act. The Supreme Court upheld the remainder of the LLRWPA.

In light of this decision, the Commission directed the staff to revise the rulemaking package, to delete the title-transfer option, but retain the option of contracting with operating disposal sites. This direction was provided in an SRM dated September 23, 1992.

The revised rulemaking package was forwarded to the Commission on November 5, 1992 (SECY-92-380). The staff was informed that the Commission had approved publication of the proposed rule in an SRM dated December 17, 1992. The proposed rule was published in the Federal Register on February 2, 1993 (58 FR 6730). The public comment period expired on April 5, 1993.

DISCUSSION:

Introduction

Fifty-five comment letters were received addressing the proposed rule. Responses were received from Agreement States (4); non-Agreement States (3); a local government organization (1); utilities or their counsel (21); non-utility LLW generators (9); nuclear power and nuclear material user-groups (5); a disposal facility operator (1); public interest groups (7); and private citizens (4). Of the seven States responding, four are Agreement States and three of these are host States. One host non-Agreement State responded. A list of commenters is provided as Enclosure 3.

Of the 55 letters received, 10 endorsed adoption of the proposed rule, 24 opposed its adoption, and 21 provided comments without taking a clear position on the rulemaking. Three host Agreement States opposed the rule and the remaining four States (one non-host Agreement State, one host non-Agreement State and two non-host non-Agreement States) supported the rule. The commenters' principal concerns, impacting the staff's recommendation to withdraw the rule, are: (1) the need to define "reasonable waste management options;" (2) the burden imposed by the rule on licensees; (3) the adequacy and clarity of the U.S. Nuclear Regulatory Commission's argument concerning the enhanced protection of the public health and safety and the environment resulting from disposal as compared with storage; and (4) the impact on the States. These concerns are discussed in the following sections.

Definition of "Reasonable Waste Management Options"

Because of the changing disposal situation, it is not possible to define in advance what will or will not be viewed as a reasonable option. This is

particularly true when considering disposal costs. Although disposal costs are expected to increase, no firm cost estimates are currently available. However, the staff would expect costs to be a consideration in determining if an option is reasonable. As several commenters suggested, other considerations may be appropriate to determine if an option is reasonable. These considerations could include, but not be limited to, the potential liability of the generator for a particular disposal option, the imminent availability of a new waste treatment technology, or the imminent availability of centralized storage by the State. The lack of a clear, precise definition for "reasonable" would afford the licensees a large degree of latitude in developing a rationale for storing LLW on-site, if they chose to do so. Therefore, it is unlikely that a licensee would clearly not be pursuing "reasonable" options. For these reasons, rule implementation will be extremely difficult, and it is the staff's judgement that it is unlikely that the proposed rule would reduce on-site storage of LLW, except for a few isolated cases. To be more effective in encouraging development of LLW disposal capacity, the rule would need to have a more substantial impact on a licensee's conduct.

Burden on Licensees

In the Supplementary Information that accompanied the proposed rule, NRC provided information concerning the expected actions to show compliance with the proposed rule. This information stated that NRC would expect the licensee to make an annual request for access to each operating commercial LLW disposal facility, for disposal of the licensee's LLW. Based on public comments, the staff has reexamined the need for this action. In the event that the disposal facility operator and/or the compact commission in which the disposal facility is located, has already provided access/import policy information to the generator or the generator's State regulatory agency, individual letters to disposal facility operators would not be required. The staff expects that LLW disposal facility access/import policies will be well-publicized and therefore, generally well-known. Written confirmation of these policies by individual LLW generators would place an unnecessary burden, albeit small, on the LLW generators. In addition, it is unlikely that these letters would cause any changes to restrictive access/import policies. This assessment is based on the actions of the Northwest and Southeast Compact Commissions. These compacts have well publicized and strictly enforced their respective policies.

The annual requirement to request access would also place a burden on disposal facility operators. Although the proposed rule contains no requirements applicable to disposal facility operators, there is an implicit expectation that disposal facility operators respond to the generators' requests for access. Individual responses would be an excessive and unwarranted burden on disposal facility licensees. Therefore, individual access requests, by the LLW generators, are similarly unwarranted.

Also, to require an annual request for access (as opposed to an inquiry on the conditions of access) presumes a fact not established in the rule itself - that in all cases, for all years, the conditions and costs associated with the requested access are reasonable.

The staff has been unable to identify a meaningful alternative to the annual licensee request, in the proposed rule, that would impose less of a burden and demonstrate compliance with the requirements of the proposed rule to exhaust other options and document these actions.

Protection of the Public Health and Safety and the Environment

The staff continues to believe that disposal of LLW is safer and involves less risk to the public health and safety than on-site storage. The protection of the public health and safety and the environment is enhanced by disposal, rather than by long-term, indefinite storage of waste. Disposal of waste in a limited number of facilities, licensed under the requirements of 10 CFR Part 61 or compatible Agreement State regulations, will provide better protection of the public health and safety and the environment than long-term storage at hundreds or thousands of sites around the country. However, the protection of the public health and safety and the environment will not be enhanced by this rule because the rule would not significantly reduce the on-site storage of LLW.

Impact on the States

The staff agrees with those commenters who argued that the rule will have little positive impact on the development of new disposal facilities. The policy discouraging the storage of LLW, embodied in the proposed regulations, was intended to help encourage national progress in the development of LLW disposal facilities. However, it is difficult to predict the extent of the rule's impact on this process, given the complex, time-consuming, and often litigious process involved in siting, licensing, and developing an LLW disposal facility. As discussed in the Options Paper, the principal factors that have impeded progress to date are: (1) site selection criteria and procedures; (2) funding; (3) legislation; (4) public and political concern associated with the disposal of LLW; (5) litigation; (6) third-party liability; (7) the perceived inadequacies in disposal regulations; and (8) the perceived desirability of storage versus disposal. Although NRC occupies a unique position in the National program and its rules, policies, and actions receive widespread attention, it is not clear that this rule would have a significant positive impact on the development of new LLW disposal facilities, because this rule would not directly affect any of these factors.

For unaffiliated States planning to develop a disposal facility, the proposed rule may negatively impact the development process. Unaffiliated States may not have the ability to exclude out-of-State waste. Therefore, even assuming the rule could be effective in deterring generators from storing substantial quantities of wastes when disposal capacity is available, the proposed rule would tend to require all LLW generators, without access to a regional disposal facility, to ship their waste to an operating disposal facility in an unaffiliated State. The prospect of receiving unwanted LLW for disposal could slow or halt LLW disposal facility development in these States and the proposed rule, if effective at all, would tend to increase this prospect (unless NRC were to somehow find this option unreasonable). Currently, two unaffiliated States (Massachusetts and New York) are planning to develop LLW disposal facilities. The unaffiliated States of Maine, Texas, and Vermont are

planning to form a compact, with Texas as the Host State.

In addition, the rule has received little support from the Agreement States. The staff informed the Agreement States of the rulemaking in February 1992, and requested their comments. One State supported the proposed rulemaking, and three States opposed it. Two States, although not opposing any provisions of the rule, stated that the rulemaking should not proceed until the Supreme Court decides on the constitutionality of the LLRWPA and the title-transfer provision. Three States provided comments and questions without taking a position on the proposed rulemaking. One State reserved comment and four States had no comments. Fifteen Agreement States did not respond. Four Agreement States responded to the notice of proposed rulemaking, published in February 1993. One Agreement State supported the proposed rule and three opposed it. To be effective, the rule must be applied in the Agreement States. This lack of support, along with the rule's assignment to Division 2 for compatibility, could result in even less precise language in compatible Agreement State regulations. Also, if the proposed rule were reassigned to Division 1, the consequence could be that Agreement State regulatory agencies would be required to assume LLW rate review functions. This would place the agencies in a potential conflicting role with other State and compact agencies. Controversial new State legislation would likely be required in many, if not all, Agreement States.

Alternatives to the Proposed Rule

In the Options Paper, the staff discussed the strategies and options the Commission might consider to advance the goals and objectives of the LLRWPA. This paper presented a range of options in four categories: (1) technical assistance; (2) revised regulations; (3) public involvement; and (4) Federal legislation. However, any major NRC initiatives may have unintended consequences that could negatively impact the efforts undertaken by the compacts and States in meeting their obligations under the LLRWPA. The staff recommends that we continue our current program and address issues as they arise (e.g., the ongoing review of the land ownership issue).

Need for Additional Storage Guidance or Licensing Requirements

In a staff requirements memorandum dated January 30, 1992, the Commission directed the staff to assess the need for additional guidance or licensing requirements, to supplement the existing regulatory framework for LLW storage, and to inform the Commission when significant needs are identified. The Agreement States were consulted and input was received from the regional offices. No significant need for additional storage guidance was identified by the Agreement States that responded. Three regions identified a need for additional guidance. Region III recommended that minimum LLW storage facility design standards for reactor licensees be established and communicated to the licensees. Region IV requested guidance for licensees that request "for-storage-only" of sealed sources, pending transfer to authorized recipients and termination of their licenses. Region I suggested that an information notice may be appropriate to remind licensees of their responsibility to train personnel in packaging and preparation of LLW to be stored on-site and/or transported off-site. In a memorandum to the Commission dated October 27,

1992, the staff reported to the Commission that, aside from these regional items, there is no significant need for additional LLW storage guidance or licensing requirements. The staff consulted directly with Regions I and III to resolve their concerns. In response to Region IV concerns, Information Notice 93-50, "Extended Storage of Sealed Sources," was issued in July 1993.

Although no significant need for additional storage guidance has been identified to date, on-site storage is expected to increase significantly beginning on July 1, 1994, when the Southeast Compact stops accepting out of region LLW at its Barnwell facility. It is estimated that several thousand LLW generators will be affected by this action. Most of these will be forced to store on-site for extended periods of time. Disposal for some generators may not be available until after the year 2000.

Specific hazards and technical considerations may need to be addressed if long-term storage is to be used (e.g., container degradation from storage in humid environments, and gas generation from radiolysis). Addressing all of these concerns with indefinite long-term storage could require more stringent safety measures. To assure that any new guidance that may be required is developed in a timely manner, the staff will review and reassess the existing guidance and licensing requirements for application to the storage of LLW beyond five years.

In addition, the staff notes that, regardless of the outcome of the above evaluation, a revision will be required to Generic Letter 81-38, "Interim Storage of Licensee-Generated Low-Level Radioactive Waste at Reactor Sites," to ensure its consistency with the Commission's regulations. This guidance inappropriately addresses 10 CFR Part 30 licensing for proposed increases in storage capacity for more than five years or if an unreviewed safety question exists as a result of the proposed increase in LLW storage capacity. There is no regulatory basis for requiring a 10 CFR Part 30 license for either of these conditions.

The staff will keep the Commission informed of the changes to existing guidance and the need for any additional guidance or licensing requirements to supplement the existing framework for LLW storage.

Resource Estimate:

The staff estimates it will require approximately 0.1 full-time equivalent (FTE) to withdraw the proposed rule and 0.3 FTE to review and reassess existing LLW storage guidance and licensing requirements and revise Generic Letter 81-38. The resources to withdraw the proposed rule are identical to that which would have been required to prepare a final rule. Therefore, this action will have no program impact. The remaining resources will be reprogrammed from existing LLW guidance development and site licensing review tasks.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.

The Commissioners

-8-

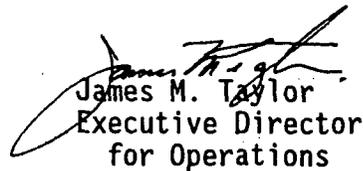
RECOMMENDATION:

That the Commission:

Approve the withdrawal of the proposed rulemaking.

SCHEDULING:

No specific circumstance is known, to the staff, that would require Commission action by any particular date in the near term.


James M. Taylor
Executive Director
for Operations

Enclosures:

1. Public Comments and NRC Responses for the Proposed Rulemaking
2. Text of the Proposed Rule
3. List of Commenters

Commissioners' comments or consent should be provided directly to the Office of the Secretary by COB Wednesday, December 15, 1993.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Wednesday, December 8, 1993, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

DISTRIBUTION:

Commissioners
OGC
OCAA
OIG
OCA
EDO
SECY

PUBLIC COMMENTS AND NRC RESPONSES FOR THE PROPOSED RULEMAKING
TO REVISE 10 CFR 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

PUBLIC COMMENTS AND NRC RESPONSES FOR THE PROPOSED RULEMAKING
TO REVISE 10 CFR 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. PUBLIC COMMENTS AND NRC RESPONSES RELATED TO THE STAFF'S RECOMMENDATION TO WITHDRAW THE PROPOSED RULE	1
III. OTHER PUBLIC COMMENTS AND NRC RESPONSES	4
A. Authority of NRC to Conduct this Rulemaking	4
B. Rulemaking Purpose and Process	6
C. Protection of the Public Health and Safety and the Environment	8
D. Clarification of, and Changes to, the Proposed Rule	13
E. Compliance and Implementation	16
F. Compatibility with Agreement States	17
G. Backfit Analysis	17
H. Related NRC Policies	18
I. Clarification of "Supplementary Information"	19
J. Impacts on Licensees and States	21
K. Other Comments	24

PUBLIC COMMENTS AND NRC RESPONSES FOR THE PROPOSED RULEMAKING
TO REVISE 10 CFR 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

I. INTRODUCTION

The U.S. Nuclear Regulatory Commission received a total of 55 comment letters on the proposed rule. Responses were received from State and local government organizations and offices (8); utilities or their counsel (21); non-utility low-level radioactive waste (LLW) generators (9); nuclear power and nuclear material user-groups (5); a disposal facility operator (1); public interest groups (7); and private citizens (4). Copies of these letters are available for public inspection and copying, for a fee, at the NRC Public Document Room at 2120 L. Street, N.W. (Lower Level), Washington, D.C.

Of the 55 letters received, 10 endorsed adoption of the proposed rule, 24 opposed its adoption, and 21 provided comments without taking a clear position on the rulemaking. Many of the commenters requested clarification of the phrase "reasonable waste management options." The adequacy and clarity of NRC's argument concerning the protection of the public health and safety and the environment concerned a large number of commenters. Many of these commenters stated that storage should be preferred to disposal. Of equal concern was the financial burden of the rule on licensees and the regulatory impact of the rule on the States.

Approximately 100 specific comments, questions, and suggestions were received that address the proposed rule. Those comments that are related to the staff's recommendation to withdraw the proposed rule are presented in Section II. The remaining comments and responses are provided in Section III, and are grouped into the following categories:

- A) Authority of NRC to conduct this rulemaking,
- B) Rulemaking purpose and process,
- C) Protection of the public health and safety and the environment,
- D) Clarification of, and changes to, the proposed rule,
- E) Compliance and implementation,
- F) Compatibility with Agreement States,
- G) Backfit analysis,
- H) Related NRC policies,
- I) Clarification of supplementary information, and
- J) Impacts on licensees and States.
- K) Other Comments

II. PUBLIC COMMENTS AND NRC RESPONSES RELATED TO THE STAFF'S
RECOMMENDATION TO WITHDRAW THE PROPOSED RULE

1. Comment. Twenty-three commenters stated that the phrase "reasonable waste management options" is ambiguous and needs to be better defined. Many of these commenters stated that the application of financial and/or cost-benefit considerations should be allowed, to determine reasonable options. Several of these commenters recommended changing "reasonable waste management options" to "reasonable waste disposal options." The commenters explained that the proposed rule could be interpreted to apply to a broad range of waste management practices including waste minimization and volume reduction. Three

commenters stated that consideration should be given to the generator's assessment of the generator's potential liability associated with disposal at a particular facility.

Response. The rule was intended to require LLW generators to use waste disposal capacity to the extent that such capacity is reasonably available. The rule was not intended to require generators to demonstrate that they have processed or treated waste as a condition for storage beyond January 1, 1996. Therefore, NRC agrees that a change from "reasonable waste management options" to "reasonable waste disposal options" would have been appropriate. However, because of the changing disposal situation, it is not possible to define in advance what will or will not be viewed as a reasonable disposal option. This is particularly true with disposal costs. Although disposal costs are expected to increase, no firm cost estimates are currently available. However, NRC would expect costs to be a consideration in determining if an option is reasonable. As several commenters suggested, other considerations may be appropriate to determine if an option is reasonable. These considerations could include, but not be limited to, the potential liability of the generator for a particular disposal option, the imminent availability of a new waste treatment technology, or the imminent availability of centralized storage by the State. The lack of a clear, unambiguous definition for "reasonable" would result in uncertainty on the part of the licensee in complying with the rule and on the part of NRC in enforcing the rule.

2. Comment. One commenter stated that NRC had not responded directly to a previously submitted Agreement State comment that the rule did not appear to be based on protection of the public health and safety nor any technical requirements.

Response. As discussed in response to the previous comment, NRC believes that the protection of the public health and safety and the environment is enhanced by disposal, rather than by long-term, indefinite storage of waste. This position is based on three concerns associated with the storage of LLW, which are addressed in the response to Comment III.C.3. However, after considering the comments submitted on the proposed rule, NRC does not believe that there is sufficient connection between the requirements in the rule for documenting that a licensee has exhausted reasonable waste disposal options and the objective of reducing on-site storage of LLW or encouraging the development of new LLW disposal capacity. In addition, NRC cannot state that this rule would provide licensees substantially greater incentive over existing requirements to dispose of their LLW at available locations in a timely manner. Therefore, the proposed rule would not be a necessary nor significant addition to the protection of the public health and safety.

3. Comment. Five commenters stated that the proposed rule will have little positive impact on the development of new disposal facilities.

Response. Based on a review of public comments and after further consideration, NRC agrees that the proposed rule may have little positive impact on the development of new disposal facilities. The policy discouraging the storage of LLW, embodied in the proposed regulations, was intended to help encourage national progress in the development of LLW disposal facilities. However, it is difficult to predict the extent of the rule's impact on this

process, given the complex, time-consuming, and often litigious process involved in siting, licensing, and developing an LLW disposal facility. Some of the principal factors that have impeded progress to date include: (1) site selection criteria and procedures; (2) funding; (3) legislation; (4) public and political concern associated with the disposal of LLW; (5) litigation; and (6) third-party liability. Although NRC occupies a unique position in the National program and its rules, policies, and actions receive widespread attention, it is not clear that this rule would have a significant positive impact on any of these factors, because this rule would not directly impact any of these factors.

4. Comment. One commenter questioned how this amendment would force or encourage the States to proceed with the siting process.

Response. The incorporation, in its regulations, of NRC's long-standing position concerning the on-site storage of LLW was intended to encourage the States to move forward with the development of LLW disposal facilities. The rule was intended to ensure that all disposal options, potentially available to generators, are investigated. However, NRC cannot state that this rule would provide licensees substantially greater incentive over existing requirements to dispose of their LLW at available locations in a timely manner.

5. Comment. Six commenters stated that the annual access request requirement would be unproductive and unnecessary if conditions remain unchanged from year to year.

Response. NRC agrees. In the "Supplementary Information" which accompanied the proposed rule, NRC provided information concerning the expected actions to show compliance with the proposed rule. This information stated that NRC would expect the licensee to make an annual request for access to each operating commercial LLW disposal facility, for disposal of the licensee's LLW. If the disposal facility operator and/or the compact commission in which the disposal facility is located has already provided access/import policy information to the generator or the generator's State regulatory agency, individual letters to disposal facility operators would not be required. NRC expects that LLW disposal facility access/import policies will be well-publicized and therefore, generally well known. Written confirmation of these policies by individual LLW generators would place an unnecessary burden, albeit small, on the LLW generators and a significant burden on disposal facility operators.

6. Comment. Four commenters stated that the rule would place an excessive burden on disposal facility operators to respond to each request.

Response. NRC agrees. Although the proposed rule contains no requirements applicable to disposal facility operators, there is an implicit expectation that disposal facility operators respond to the generators' requests for access, either individually or in a well-publicized announcement of access/import policy of the Host State or associated compact commission. Individual responses would be an excessive and unwarranted burden on disposal facility licensees.

7. Comment. Several additional questions were received on the actions a licensee would be required to take to comply with the rule. One commenter noted that State and/or compact provisions may not permit a generator to export LLW and asked the question: "If a petition for export has been denied, what additional action should the licensee take to comply?" Another commenter asked the number of requests required to show compliance and wondered whether such requests should be sent by certified mail. This commenter also asked what the licensee would be expected to do if the disposal facility operator(s) failed to respond.

Response. NRC agrees that some compact commissions may not permit the export of LLW from the compact. It would be unreasonable to expect a licensee, that had been denied an export petition to take any other action. Because the rule is being withdrawn, the remaining questions concerning compliance are moot.

8. Comment. Two commenters stated that the language requiring Part 50 licensees to document that their storage activities will not "...compromise safe operation of the licensee's activities, nor decrease the level of safety..." should be deleted. These commenters believed that the proposed rule appears to single out Part 50 licensees. In addition, these commenters stated that if NRC believes that additional requirements are necessary to ensure safety of LLW storage activities, those requirements should be identified specifically and their health and safety basis provided, so licensees may effectively comment on them.

Response. NRC agrees that the requirements of 10 CFR 50.54(ff)(2)(ii) are not necessary. Power reactor licensees are required to document the safety of LLW storage facilities under other conditions of their licenses (e.g., 10 CFR 50.59, for a new storage facility).

III. OTHER PUBLIC COMMENTS AND NRC RESPONSES

A. Authority of NRC to Conduct this Rulemaking

1. Comment. Thirteen commenters questioned the authority of NRC to conduct this rulemaking under the provisions of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPA). The commenters stated that the LLRWPA imposes obligations on the States, not on the licensees, and that this shift of responsibility is not statutorily supportable and results in an impossible burden on the licensees.

Response. NRC has broad authority under the Atomic Energy Act of 1954, as amended, (AEA) for rules and orders as it "...may deem necessary or desirable to ... protect health or to minimize danger to life and property." As stated in the proposed rulemaking, it is under this authority, not the LLRWPA, that NRC has undertaken this rulemaking. NRC is not attempting to shift any responsibility from the States to the licensees. Because the public health and safety will be enhanced by disposal, rather than long-term, indefinite storage of wastes, licensees should dispose of their LLW as soon after it is generated as possible. However, after considering the comments received on the proposed rule, the Commission does not believe that there is sufficient connection between the requirements in the rule and the objective of reducing on-site storage of waste or encouraging the development of new

waste disposal capacity. Therefore, the proposed rule would not be a necessary or significant addition to the protection of the public health and safety. NRC disagrees that the rulemaking would have placed a significant burden on the licensees. The annual burden, that would have been imposed by the rule, is estimated to be 13 hours, for the average licensee, presuming NRC would agree with the licensee's assessment of the reasonableness of waste management options. However, given the limited benefit of the rule, this burden is not warranted.

2. Comment. Two commenters stated that the proposed rule is not consistent with the June 19, 1992, U.S. Supreme Court ruling. One commenter stated that NRC is still looking for strategies to force States to provide disposal facilities. One commenter questioned how the rulemaking is consistent with the ruling when the ruling states that the burden for disposal, if so chosen by the State's residents, may fall directly on the generators of the waste.

Response. The U.S. Supreme Court finding in *New York v. United States* affected only the provision of the LLRWPA that would have required States to take title to, and possession of LLW. Other provisions of the LLRWPA remain intact. This rule would have imposed new requirements only on licensees that generate and store LLW on-site. It would not have placed any requirements on the States (except compatibility) nor would it have required a licensee to take any action that would have been inconsistent with the LLRWPA or the finding of the Supreme Court in *New York v. United States*.

3. Comment. One commenter stated that the rule lacks a clear connection between the January 1, 1996, cutoff date and protection of the public health and safety. This commenter further stated that NRC has no reason to apply this date to licensees when the U.S. Congress (Congress) intended that it apply only to the States.

Response. NRC agrees that the milestone, incentives, and penalties associated with the date of January 1, 1996, in the LLRWPA applied to the States and not licensees. NRC also agrees that there is no public health and safety significance directly associated with this date. However, a clear legislative intention of the LLRWPA is the development of new LLW disposal facilities by January 1, 1993, and in no case later than January 1, 1996. This date had been chosen to support the legislative intention of the LLRWPA and its legislated preference for disposal over storage of LLW.

4. Comment. One commenter stated that NRC lacks authority to enforce the "five year limit" in Generic Letter 81-38.

Response. NRC agrees. There are no statutory or regulatory requirements that would generally limit the length of time that LLW can be stored. Notwithstanding the guidance in Generic Letter 81-38, "Interim Storage of Licensee-Generated Low-Level Radioactive Waste at Reactor Sites," power reactor licensees can perform safety reviews under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," 10 CFR 50.59, "Changes tests, and experiments" and store LLW on-site for the full term of the facility license, if no unreviewed safety question exists and if no changes to technical specifications are required. The 10 CFR 50.59 review process is discussed in the response to Comment III.K.2. The five-year limit for materials licensees is established only as informal agency policy.

B. Rulemaking Purpose and Process

1. Comment. One commenter stated that although NRC is proposing this rule to encourage disposal, the rule does not address disposal, only "waste management options."

Response. NRC agrees. The proposed rule should have addressed waste disposal options rather than waste management options. However, this change would not affect NRC's conclusion that there is no substantial connection between the requirements of the rule and the objective of achieving the safer option of disposal.

2. Comment. Several commenters stated that the proposed rule is not in compliance with the notice and comment requirements of the Administrative Procedures Act (APA), because the licensing framework documents were not subject to review and comment.

Response. The following seven licensing framework documents were referenced in the "Supplementary Information" associated with the proposed rule.

Type	Number	Title
Generic Letter	81-38	"Interim Storage of Licensee-Generated Low-Level Radioactive Waste at Reactor Sites"
Generic Letter	85-14	"Commercial Storage at Power Reactor Sites of Low-Level Radioactive Waste Not Generated by the Utility"
Information Notice	89-13	"Alternative Waste Management Procedures in Case of Denial of Access to Low-Level Waste Disposal Sites"
Information Notice	90-09	"Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees"
Standard Review Plan (NUREG-0800)*	Sec. 11.4	"Solid Waste Management Systems"

*Copies of NUREG documents 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, 5285 Port Royal Road, Springfield, VA 22161. A copy is also available for inspection and/or copying at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC.

Type	Number	Title
Regulatory Guide	1:143	"Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants"
Inspection and Enforcement Circular	80-18	"10 CFR 50.59 Evaluations for Changes to Radioactive Waste Management Systems"

In addition, Information Notice 93-50, "Extended Storage of Sealed Sources," was issued on July 8, 1993, to identify the information NRC considers necessary for placing a license into possession-only status, if extended storage of sealed sources is necessary.

As stated in the "Supplementary Information" of the proposed rulemaking, these documents provide guidance and as such, they are informational and not binding. Licensees may apply and follow the guidance provided, or they may choose an alternate course of action, as long as that alternative is consistent with established regulations, and provides sufficient information on which a licensing action can be based. Because the referenced guidance documents do not contain requirements, and these documents are not being incorporated in the regulations, they are not subject to the notice and comment requirements of the APA. Although not subject to the provisions of the APA, public comments were received on several of these documents. These documents are available, for inspection and copying, for a fee, at the NRC Public Document Room, 2120 L. Street, NW. (Lower Level), Washington, DC. NRC welcomes any comments on the guidance documents, to help ensure that they are complete and meet licensee needs.

3. Comment. One commenter stated that all on-site storage of LLW, other than reasonable short-term storage necessary for decay or for consolidation or collection for shipment off-site, should require a license amendment, with the opportunity for a public hearing, and the preparation of a safety evaluation and environmental impact statement (EIS) by NRC. This commenter argued that these actions will actually discourage extended on-site storage and better ensure that the public health and safety are satisfactorily protected.

Response. NRC has criteria and requirements in place in 10 CFR Parts 2, 30, 40, 50, 51, 52, 70, and 72 for determining when license amendments, hearings, and EIS' are needed. These requirements cover all the licensing actions performed by NRC, including operation of nuclear power plants, and possession and use of radioactive materials by hospitals, research labs, etc. The intent of these regulations is to establish general requirements for the licensing process and for the implementation of the Commission's responsibilities under the National Environmental Policy Act of 1969. As such, it would be not be appropriate to use these general requirements to discourage a particular activity.

5. Comment One commenter stated that NRC should require an EIS for the entire generic program of proposed on-site storage and alternatives or for each licensee, case-by-case.

Response This rule would not constitute a new generic program for on-site storage. Therefore, a generic EIS would not be required. On-site storage of LLW is authorized under current licenses. Any environmental impact of operating an on-site LLW storage facility will be addressed, as required, on a case-by-case basis, as part of the licensing action for that facility, under previously established regulatory requirements.

C. Protection of the Public Health and Safety and the Environment

NRC specifically invited comment on the public health and safety rationale, as well as on the comparative risk of potential releases as a result of an event or accident at numerous LLW storage sites around the country, as opposed to the potential release from a limited number of disposal sites designed to meet the siting and design requirements in 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," or compatible Agreement State regulations. Seventeen commenters responded to this invitation. Most commenters expressed a clear preference for storage over disposal.

1. Comment. One commenter stated that storage does not necessarily mean there is an increase in worker exposure.

Response. NRC agrees that worker exposure will not increase in all cases. However, for the reasons discussed in the "Supplementary Information" accompanying the proposed rule, exposures will increase, in many situations.

2. Comment. Two commenters argued that storage, compared to disposal, may reduce worker exposure, because future waste sites may need to be exhumed or require remediation.

Response. NRC does not believe that disposal will increase occupational exposures. NRC considers disposal to be permanent emplacement of LLW with no firm plans or timetable for retrieval or need for exhumation. The siting, design, construction, operation, and closure of an LLW disposal facility, conducted under the provisions of Part 61, will ensure that waste is permanently isolated. NRC believes that the stringent performance objectives and technical requirements of Part 61, or compatible Agreement State regulations, will prevent problems from occurring at sites, such as those experienced at older disposal sites, and will preclude the remedial activities addressed by the commenter.

3. Comment. One commenter stated that the argument that storage at hundreds and thousands of sites is less safe than centralized disposal is flawed. This argument ignores the responsibilities of all generators.

Response. NRC disagrees. NRC's analysis does not ignore the responsibilities of generators. Generators have the primary responsibility to ensure the protection of the public health and safety and the environment. As stated in the "Supplementary Information" accompanying the proposed rule, LLW can be safely stored. However, as discussed, several conditions, inherent to the storage situation, make disposal a safer alternative. These conditions are: (1) waste container degradation and the consequences of this degradation; (2) increased radiation exposure to workers; and (3) potential releases in the event of an accident.

4. Comment. Two commenters found fault with this analysis because waste degradation will also occur in a disposal facility.

Response. NRC agrees that some waste package degradation will occur after disposal. Unlike storage, however, the effects of such degradation are considered in analyses of disposal facility performance and will be mitigated by the design and operation of the disposal facility, including waste form requirements, arrangement of packages in the disposal facility, engineered features, and natural conditions of the disposal site.

5. Comment. Several commenters argued that the public health and safety are better served by managing waste by storing it on-site until a sufficient technology is developed to guarantee isolation from the environment for the hazardous life of the radioactive material. Those taking this position cited problems at both the Hanford, Washington, and Barnwell, South Carolina, LLW disposal facilities.

Response. The problems at Hanford, reported by the commenter, were not related to the commercial LLW disposal facility. The problems relate to the facilities operated by the U.S. Department of Energy (DOE). In the case of the Barnwell facility, the problems reported by the commenter relate to the detection of tritium in the groundwater. The South Carolina Department of Health and Environmental Control has reported that tritium has been detected at concentrations slightly above background in groundwater monitoring wells at the facility, but well below the U.S. Environmental Protection Agency (EPA) drinking water standard. Monitoring continues and action has been taken to reduce the source of tritium. The tritium originated from scintillation fluids that have not been permitted to be disposed of at the site for many years. NRC continues to believe that these facilities have been safely operating and disposing of LLW for decades. New facilities, designed to meet the specific performance objectives and technical requirements of Part 61, will ensure that LLW disposed of in these facilities is permanently isolated. Indefinite, long-term storage of waste, on the other hand, leaves open a number of questions that may affect protection of the public health and safety.

6. Comment. One commenter stated that storage allows for retrieval for inspection and repackaging as required to ensure continued isolation.

Response. The requirements of Part 61 do not preclude designing a disposal facility for retrievability, as long as the performance objectives and technical requirements of the regulation are met.

7. Comment. Five commenters stated that the public health and safety rationale presented in the "Supplementary Information" accompanying the proposed rule is unclear and questioned why disposal is preferred if storage is safe. However, the commenters did not identify those areas of the rationale that are unclear.

Response. Although LLW can be safely stored, NRC believes that disposal of LLW is safer and involves less risk to the public health and safety than on-site storage. Therefore NRC believes that the protection of the public health and safety and the environment is enhanced by disposal, rather than by long-term, indefinite storage of waste. Disposal of waste in a limited number

of facilities, licensed under the requirements of Part 61 or compatible Agreement State regulations, will provide better protection of the public health and safety and the environment than long-term storage at hundreds or thousands of sites around the country. Because the commenters did not address specific areas requiring clarification, NRC is unable to address these concerns.

8. Comment. Although comments were specifically invited on the comparative risk assessment, of potential releases from LLW storage and disposal sites, only one comment was received. This commenter stated that moving LLW off-site could expose a far greater number of people to risks. The commenter did not explain the basis for this conclusion.

Response. NRC disagrees. The "Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes," NUREG-0170, concluded that the average dose to the population at risk from normal transportation of radioactive material is a small fraction of the limits recommended for members of the general public from all sources of radiation other than natural and medical sources and is a small fraction of the natural background dose. NUREG-0170 further concluded that the radiological risk from accidents in transportation is small, accounting for about one-half percent of the normal transportation risk, on an annual basis. LLW shipments are but a fraction of all radioactive material shipments. Two more recent technical bulletins, published by the DOE National LLW Management Program, support these conclusions. These publications are: (1) "Commercial Low-Level Radioactive Waste Transportation Safety History," EGG-LLW-10135, 92-2, March 1992; and (2) "Managing Commercial Low-Level Radioactive Waste Beyond 1992: Transportation Planning for a LLW Disposal Facility," EGG-LLW-10135, 92-1, January 1992.** In addition, transportation of LLW exposes the public for a relatively short period of time. Storage is a much longer process and involves potentially larger exposures to workers from activities such as monitoring, inspecting, and repackaging. Finally, because storage is only a temporary condition, transportation will ultimately occur. Storage does not eliminate the transportation of LLW.

9. Comment. One commenter stated that the rationale regarding the protection of the public health and safety and the environment does not address increased exposure to the general public.

Response. On-site storage of LLW is expected to result in little, if any, increased radiation exposure to the general public. The potential for off-site radiation exposures because of the degradation of waste packages or an accidental release involving stored radioactive wastes is small because of the chemical and physical forms of the wastes, the quantities and half-lives of the radioactive materials present in the wastes, and the radiation protection programs required of licensees. As noted in the "Supplementary Information" that accompanied the proposed rule in the Federal Register notice, these events could lead to on-site contamination, increased worker exposure, and the need for repackaging of the damaged or deteriorated containers.

**DOE National LLW Management Program publications can be obtained from U.S. Department of Energy, Idaho Field Office, 785 DOE Place, Idaho Falls, ID 83401-1562.

10. Comment. Three commenters disagreed with the statement that the operating disposal sites have been safely isolating waste for decades. The commenters addressed only problems with the Barnwell, South Carolina, facility.

Response. The response to Comment III.C.5 addresses the situation at the Barnwell facility. As stated in that response, NRC continues to believe that these facilities have been safely operating and disposing of LLW for decades. New facilities, designed to meet the specific performance objectives and technical requirements of Part 61, will ensure that LLW disposed of in these facilities is permanently isolated.

11. Comment. One commenter stated that the rationale, associated with the protection of the public health and safety and the environment, applies equally to off-site storage, and the rule should apply to both situations. The commenter did not provide details nor a supporting argument for this conclusion.

Response. One of NRC's concerns is the potential proliferation of LLW storage sites and the associated risk of an accidental release from one of these sites. This concern is significantly reduced if LLW from multiple licensees is consolidated and stored at a centralized location. Therefore, NRC does not agree that the rationale applies equally to off-site storage. NRC's definition of "on-site" is provided in the response to Comment III.D.8. Based on this definition, LLW stored off-site would generally be in a centralized facility (e.g., a facility operated by a State or a broker).

12. Comment. Two commenters stated that the rule would result in hasty or inappropriate LLW management decisions, with adverse health and safety consequences. The commenters did not provide arguments to support their positions.

Response. NRC does not agree that this rule would result in hasty or inappropriate LLW management decisions, with adverse consequences. This rule would not require nor does it suggest inappropriate or hasty waste management planning and implementation. The LLW storage guidance previously discussed was developed to assist licensees in conducting a timely assessment of the need for LLW storage and preparing a license amendment request, if required.

13. Comment. One commenter stated wastes generated by academic/medical institutions and destined for land disposal will be predominately ^3H and ^{14}C . Neither of these isotopes poses a significant public health risk, even if an accident occurs during storage of waste containing these two radionuclides.

Response. NRC agrees that ^3H and ^{14}C may not pose a significant risk to the general public. However, waste package degradation and/or repackaging of wastes containing these radionuclides could result in increased worker exposures from these nuclides. The conditions of concern inherent to the storage of LLW are addressed in response to Comment III.C.3. These concerns are applicable to all generators.

14. Comment. One commenter stated that it is unwise for NRC to prohibit or force any particular form of storage or disposal of LLW other than to require that the isolation of the waste be accomplished in a manner that will

completely prevent release to the biosphere.

Response. NRC agrees that both storage and disposal activities should be conducted in a manner that isolates waste from the biosphere and ensures protection of the public health and safety. The proposed rule would not prohibit storage. NRC recognizes that interim storage will be necessary if there are no reasonable disposal options. Through its licensing process, NRC will ensure that storage, if required, is conducted in a safe manner. However, because of the conditions discussed in the response to Comment III.C.3, disposal is considered the safer alternative, for both current and new facilities.

15. Comment. Several commenters opposed to on-site storage expressed concern about storage facilities becoming de facto disposal facilities.

Response. NRC shares this concern, but believes that established NRC and Agreement State licensing, license renewal, and decommissioning requirements will ensure that required LLW storage facilities do not become de facto disposal facilities. Licenses are issued for a specified term and storage practices are reviewed, if necessary, at the time of renewal. In addition, any LLW remaining in storage on-site would be required to be disposed prior to license termination or decommissioning of a facility.

16. Comment. Several commenters stated that LLW storage should not be permitted at sites that are subject to factors that could threaten the public health and safety and the integrity of the waste isolation.

Response. Established NRC and Agreement State licensing and inspection policy and procedures will ensure that required LLW storage facilities are designed, constructed, operated, and maintained to ensure the protection of the public health and safety and the integrity of the waste isolation.

17. Comment. One commenter stated that the proposed rule will place an additional target on the reactor sites. The commenter did not provide supporting rationale for this position. In the commenter's opinion, the proposed rule should be placed on hold until such time as the adequacy of licensee defenses are deemed sufficient. The commenter cited recent terrorist activities to support his position. No other rationale was provided.

Response. It is not clear how this rule would "...place an additional target on reactor sites." If an additional storage facility is needed at a reactor site, this facility would not be considered a significant target that presents a threat to the public. Each reactor site has a security force to protect it against trespassers.

18. Comment. One commenter stated that there are many nuclear facility sites that are totally unsuited for either operating plants or any form of waste storage, much less disposal. This commenter further stated that reactors are located in floodplains, on islands, and along eroding coastlines with no consideration for the potential loss of control over radioactive materials or wastes.

Response. The issue of the suitability of the location of power reactor sites for operation or storage of LLW is outside the scope of this rulemaking.

However, each facility licensed to operate under Part 50 has been evaluated and approved by NRC to ensure that its operation is within appropriate safety criteria. The evaluation process for new power reactor LLW storage facilities is discussed in the response to Comment III.K.2.

D. Clarification of, and Changes to, the Proposed Rule

1. Comment. One commenter stated that the rule will result in substantially more on-site storage. Because of this expected outcome, the commenter stated that a provision should be included that requires NRC to perform inspections of the stored waste at a frequency that will detect a breach of containment, additional exposure to the public, or contamination of the environment.

Response. NRC does not believe that the rule would result in more on-site storage. Rather, the rule was intended to discourage storage of LLW and encourage the development of new LLW disposal facilities. However, NRC shares the commenter's concerns about safety in storage. NRC and the Agreement States have active inspection programs, including the inspection of storage facilities and practices. If problems with LLW storage are identified, licensees will be required to take corrective actions. This program is considered adequate to protect the public health and safety and the environment.

2. Comment. One commenter stated that the exemption for collection and consolidation for shipment off-site, only when the licensee has access to a disposal facility, is too restrictive. By way of explanation, the commenter stated that the rule would preclude the accumulation of sufficient material for off-site processing and frustrate the development of enhanced on-site storage capabilities.

Response. The rule would not preclude licensees that have demonstrated that they do not have access to a disposal facility, in accordance with the rule, from accumulating waste for off-site processing, if this activity is otherwise authorized.

3. Comment. One commenter stated that the final rule should allow plants, that will have waste with in-storage times greater than five years, between now and January 1, 1996, to continue to store on-site until then, by meeting 10 CFR 50.59 evaluation criteria.

Response. Power reactor licensees can perform safety reviews, under 10 CFR 50.59, and store LLW on-site under the terms of the facility license, if no unreviewed safety question exists and if no changes to technical specifications are required.

4. Comment. Eight commenters stated that special consideration should be provided for non-routine waste forms, such as large plant equipment or components, unusual volumes from non-routine operations, and other waste types where justifiable reasons for storage go beyond the reasons of the proposed rule. Two commenters recommended a revision to the proposed rule for 10 CFR 50.54(ff)(2). The recommended revision follows, with the new text underlined.

For on-site storage of LLW beyond January 1, 1996 (other than reasonable short-term storage necessary for decay or for collection or consolidation for shipment off-site, or for reasonable storage of unusual or non-routine LLW, including but not limited to, large or highly radioactive components for which immediate disposal may not be practical, in the case where the licensee has access to an operating disposal facility), the licensee shall document that -

Response. NRC agrees that it may be unreasonable to immediately dispose of some large or highly radioactive components. For example, as stated in the response to Comment III.H.2, there are several unique aspects of irradiated reactor components that power reactor licensees would have to consider in deciding to store or dispose of these components. Although NRC believes the proposed rule had sufficient flexibility to accommodate this situation, the question of revising the rule is moot, because the rule is being withdrawn.

5. Comment. Two commenters stated that the proposed rule should be limited to long-lived isotopes. One commenter recommended a provision for generators to store, for decay, LLW having isotopes with a half-life of 90 days or less.

Response. The proposed rule includes an exemption from the requirements of the rule for "...reasonable short-term storage necessary for decay or for collection or consolidation for shipment off-site" The "Supplementary Information" accompanying the proposed rule discussed this topic. Generally, for non-medical LLW, radioactive material with a half-life of less than 65 days can be held in storage for decay and eventual disposal as non-radioactive material, if allowed by the license. Other decay in storage provisions are considered on a case-by-case basis, such as storing, for decay, LLW containing nuclides with half-lives less than 90 days. Decay in storage for medical waste is governed by 10 CFR Part 35, "Medical Use of Byproduct Material," Section 92, "Decay-in-storage." These regulations and licensing procedures provide sufficient flexibility to address specific generator requirements for decay in storage.

6. Comment. The proposed rule includes an exemption from the requirements of the rule for "...reasonable short-term storage necessary for decay or for collection or consolidation for shipment off-site" Three commenters stated that the time limit for "short-term storage" needs to be defined.

Response. Regulations and licensing procedures concerning time limits for decay in storage are discussed in the response to Comment III.D.5. The time needed to accumulate a sufficient quantity of waste for off-site processing will vary, depending on the type and scope of the licensee's operation. The rule would have had to allow flexibility for these variations. A defined time limit would have eliminated this flexibility.

7. Comment. One commenter stated that NRC must write the cited guidance provided into the regulation, to provide an adequate regulatory basis for the storage of LLW on-site.

Response. Although NRC regulations do not contain requirements specifically for LLW storage, the regulations do contain requirements

applicable to all radioactive material. These regulations provide an adequate basis for licensing the storage of LLW. These general regulations require that a licensee: (1) demonstrate that its facilities and equipment are adequate; (2) demonstrate that personnel are qualified by training or experience to use the licensed materials for the requested purpose; (3) prepare an environmental report, decommissioning plan, or certification of financial assurance, and an emergency plan, if required by specific conditions; and (4) have a radiation protection program, to ensure the protection of the public health and safety and the environment. The licensing framework documents previously identified and discussed provide an acceptable approach for meeting these requirements. Licensees may apply and follow the guidance provided, or they may choose an alternate course of action, as long as that alternative is consistent with established regulations, and provides sufficient information upon which a licensing action can be based. These licensing framework documents should remain as guidance, to provide the necessary flexibility for licensees to prepare LLW storage license and amendment applications tailored to their unique situations.

8. Comment. One commenter questioned whether "on-site" means at the point of generation, or if this is a more general term referring to any location.

Response. The term "on-site" refers to the location of the generating licensee's facility or plant at which the storage of LLW is otherwise authorized. This definition includes the consolidation of LLW from multiple units or facilities of one licensee, at a particular site, to be stored under the license of any of the units at that site. LLW is still considered to be on-site if it is transferred between facilities of the same licensee.

9. Comment. One commenter remarked that the State should not be required to contract, either directly or indirectly, for the storage and management of LLW.

Response. NRC agrees. The proposed rule did not require this action by the State.

10. Comment. One commenter stated that all relevant documentation should be retained for the duration of the license to operate the facility or possess radioactive material.

Response. The three years specified in the rule would have provided sufficient time for NRC to inspect the records of major licensees and verify compliance.

11. Comment. One commenter stated that the rule implies that a State can be required to take either liability or possession, at the generator's request.

Response. NRC disagrees with this interpretation. The proposed rule neither states nor implies such action on the part of a State. The proposed rule states that the generator explore other reasonable waste management options that would include taking all reasonable steps to contract, either directly or through the State, for disposal of LLW. NRC knows of no obligation for the State to enter into such a contract and the rule would not have required this action.

12. Comment. One commenter recommended that the rule should reflect the fact that different classes of licensees have different capabilities to safely store LLW. Nuclear power plant licensees generally have greater resources, greater land areas, the ability to exclude public access from the site, and greater expertise in handling LLW than do small materials licensees. The latter are often located in urban areas with limited space for storage and are smaller business entities that may lack the financial and human resources to manage waste safely.

Response. NRC agrees that the capabilities to store LLW will vary from licensee to licensee, based on the scope of their individual licensed programs, specific radionuclides used, and types of uses carried out through the licensed program. All of the factors mentioned by the commenter have been and are considered by NRC, before a license or license amendment for LLW storage is granted. The capabilities of individual licensees are reflected in the conditions set forth in their respective licenses and/or license amendments to store LLW. NRC's inspection program evaluates compliance with these conditions.

E. Compliance and Implementation

1. Comment. One commenter asked: "If an agreement were reached for disposal, how long would a licensee have to cease all interim storage operations and dispose of all waste?"

Response. The amount of time required to transfer LLW from storage to disposal will vary, depending on such factors as waste generation rate, volume of waste in storage, possible processing and repackaging, and the availability of trained personnel to safely supervise and conduct the transfer. Because of these varying conditions, it is not possible to set a time limit for removing LLW from storage for disposal. Licensees would be expected to take timely actions consistent with these conditions, as well as other conditions that may exist, to dispose of their stored LLW. Guidance in Information Notice 90-09 requests that licensees address the time it will take to transfer the estimated storage inventory, in a license amendment request.

2. Comment. One commenter questioned if a generator sends waste to a broker, has the generator successfully "contracted for disposal."

Response. Because the rule is being withdrawn, this question is moot.

3. Comment. One commenter asked: "If Federal or State agencies would be responsible for reviewing and approving storage plans and conducting inspections?"

Response. Agreement States have formal agreements with the NRC by which those States have assumed regulatory responsibility over byproduct and source materials, and small quantities of special nuclear materials (SNM). This regulatory authority would include reviewing and approving storage plans associated with license applications and license amendment requests pertaining to the storage of LLW. NRC is responsible for these activities for all licensees in non-Agreement States and for Federal, reactor, fuel cycle, and SNM licensees (which possess SNM in a quantity sufficient to form a critical mass) in Agreement States. (Regulations concerning continued NRC regulatory

authority in Agreement States are set forth in 10 CFR 150.)

4. Comment. One commenter asked if NRC is going to base permission for storage of LLW on the State's progress to develop an LLW disposal facility.

Response. NRC's licensing process for LLW storage does not include the consideration of a State's progress to develop a disposal facility.

5. Comment. One commenter requested that medical/research licensees be granted a grace period for budgeting disposal expenses, before initiating a reduction of stored volume.

Response. Because the rule is being withdrawn, this request is moot.

F. Compatibility with Agreement States

In discharging its responsibilities, the AEA empowers NRC to relinquish part of its regulatory authority, over source, byproduct, and special nuclear material, to the States. Under Section 274 of the AEA, before NRC enters into such an agreement, one requirement is that the State's radiation control program be compatible with NRC's. NRC regulations concerning NRC's relationship with Agreement States are contained in 10 CFR Part 150. NRC categorizes its regulations under four compatibility divisions. Division 1 regulations must be adopted verbatim. Under Division 2, language identical to that in NRC rules is not necessary, provided that the underlying principles are the same. For those rules categorized as Division 3, States are encouraged to adopt the regulatory approach taken by NRC, but are not required to do so. There are certain regulatory functions that are reserved to NRC pursuant to the AEA and Part 150. Rules pertaining to these areas are designated as Division 4.

1. Comment. Three commenters addressed the topic of compatibility. Two commenters stated that imposition of the rule as a compatibility Division 2 rule will impede States' ability to remain flexible, to respond best to public health and safety concerns with LLW storage. These commenters stated that the rule should be classified, at most, as Division 3. The other commenter stated that the rule should not be made a compatibility requirement.

Response. The rule will not impede the Agreement States' ability to regulate LLW storage, as they determine necessary to protect the public health and safety and the environment, when disposal is not reasonably available. However, because the rule is being withdrawn, the question of the level of compatibility is moot.

G. Backfit Analysis

1. Comments. The backfit analysis accompanying the proposed rule concluded that the proposed action was not a backfit, as defined in 10 CFR 50.109 (Backfit Rule). NRC specifically requested public comment on this analysis. Five commenters responded to this request. Four commenters disagreed with NRC's conclusion, arguing that the rule would add to the procedures to operate a nuclear power plant, by requiring demonstration of the exhaustion of all other options as a prerequisite for storage. These commenters concluded that this rule constitutes a backfit and is unjustified. One commenter stated that

the requirements must be designed and applied in a flexible manner, to ensure that the rule is not applied in such a way as to interfere with 10 CFR Part 50 license authority to store LLW under existing licenses, and thereby constitute a backfit.

Response. NRC disagrees. The Commission does not believe that the procedures in the proposed rule constitute a backfit, under the Backfit Rule. The procedures as set forth in the proposed rule are directly concerned with off-site disposal of the LLW generated at a reactor. As such, the rule does not modify procedures required to design, construct, or operate a Part 50 facility. However, because the rule is being withdrawn, the question of the applicability of the Backfit Rule is moot.

H. Related NRC Policies

1. Comment. One commenter stated that NRC's policies concerning storage and disposal of LLW are incongruous with NRC's policies on storage of high-level waste (HLW). NRC currently allows HLW to be stored indefinitely. Concerns for public health and safety posed by storage of LLW pale in comparison to similar concerns regarding HLW, and yet the procedure is allowed.

Response. The policies are not inconsistent. This comment was addressed in the "Supplementary Information" that accompanied the proposed rule.

The LLW situation is significantly different from that of HLW. Under the Nuclear Waste Policy Act of 1982, as amended, the Federal government is developing a facility for disposal of HLW. In the LLW program, it is the Commission's judgment that the NRC's regulations will encourage disposal by requiring generators to seek available disposal options. Furthermore, unlike HLW, commercial LLW disposal sites are currently operational, and development of new LLW disposal facilities continues, with two new facilities scheduled to be operational by January 1, 1996. The risk to public health and safety from hundreds or thousands of temporary storage facilities is greater than that from a limited number of well-controlled disposal sites in the country.

Because LLW disposal is currently available to most generators (unlike HLW), and new disposal facilities are scheduled to be in operation within approximately three to five years (unlike HLW), NRC sees no inconsistency in its policies.

2. Comment. One commenter stated that this rule is not consistent with the current practice of allowing utilities to store irradiated reactor components on-site for extended periods of time.

Response. NRC disagrees. There are several unique aspects of irradiated reactor components that would need to be considered by reactor licensees. First, some components may not be considered to be waste (i.e., they could potentially be decontaminated and reused). NRC would expect that any waste resulting from decontamination be sent for disposal, if a disposal option is available. Second, some of these components are greater than Class

C LLW and cannot be disposed of at a commercial disposal facility. The disposal of this waste is a DOE responsibility. However, DOE does not have a disposal site for this waste. Third, it is often advantageous to store this unique waste for extended periods to allow ⁶⁰Co to decay, resulting in substantially less radiation dose to the workers involved with handling, packaging, and disposing of the components. Finally, this waste stream is a small fraction of the total volume of LLW produced by a nuclear power plant.

3. Comment. One commenter asked when NRC has taken a step to encourage reduction in the source of LLW (i.e., reduction or elimination of activities that generate LLW). Another commenter suggested that alternatives to storage should be explored. Suggested alternatives included source reduction and minimization.

Response. As discussed in response to Comment III.K.14, NRC's mission is to ensure adequate protection for the public health and safety, the common defense and security, and the environment, in the use of nuclear materials in the United States. This mission does not include discouraging or promoting the use of nuclear materials, unless such actions were taken for safety reasons. Therefore, it is inappropriate for NRC to examine source reduction as an alternative to storage.

On October 16, 1981, NRC established a policy regarding volume reduction of LLW. The policy statement, which was published in the Federal Register (46 FR 51100), addresses: (1) the need for volume reduction policy; and (2) the need for waste generators to minimize the quantity of waste produced. The policy also states that NRC will take expeditious action on requests to license volume reduction systems. A copy of the Federal Register notice was sent to all licensees and State authorities, to advise them of this policy. NRC has actively supported this policy, through consultation with licensees regarding volume reduction practices, assessing state-of-the-art methods for achievement of volume reduction, and licensing volume reduction systems. In addition, NRC has published the contractor report, "Volume Reduction Techniques in Low-Level Radioactive Waste Management," NUREG/CR-2206. This report provides a comprehensive compilation and database of various volume reduction techniques, and an economic analysis of several volume reduction alternatives. In addition, NRC actively participates in seminars and conferences that address a variety of LLW storage issues including volume reduction.

I. Clarification of "Supplementary Information"

1. Comment. One commenter noted that the "Supplementary Information" accompanying the proposed rule states that "...all correspondence to LLW disposal facility operators" be retained. The commenter recommended that only correspondence concerning the annual access request would be relevant.

Response. NRC agrees. The referenced statement in the "Supplementary Information" of the proposed rule was flawed. However, the comment is moot, because the rule is being withdrawn.

2. Comment. Three commenters stated that the distinction made between material and waste is ambiguous. The Federal Register notice for the proposed rulemaking contains a response to a comment stating, "Waste is considered to be any material or component for which the licensee foresees no further use."

The commenters stated that this "new definition" would create unnecessary liability for a licensee, because of its vagueness, and exposes each classification decision to challenge, by parties with varying interpretations.

Response. This statement was not intended to modify the definition of waste. The term "waste" is defined in 10 CFR 61.2. No changes to this definition are included. As stated in the "Supplementary Information" accompanying the proposed rule, NRC will continue to rely on the licensee, to determine when material and components become waste, and will periodically review the licensee's conclusions, to determine if they are reasonable and appropriate.

3. Comment. Two commenters addressed the discussion of emergency access. One commenter stated that 10 CFR Part 62, "Criteria and Procedures for Emergency Access to Non-Federal and Regional Low-Level Waste Disposal Facilities," implies that petitioning NRC for emergency access to disposal is an option of last resort, although the proposed rule suggests that extended storage is an option of last resort. This commenter requested that the hierarchy of waste management options should be explicitly stated. The second commenter stated that emergency access should not be applied as a solution to this problem.

Response. NRC's statement, that on-site storage of LLW is a measure of last resort, is made in the context of routine waste management practices. Emergency access is not a routine waste management practice. As stated in Information Notice 91-65, "Emergency Access to Low-Level Radioactive Waste Disposal Facilities," emergency access is to be used only under very limited and rare circumstances and it is not an alternative for those States not meeting the milestones of the LLRWPA. Instances where emergency access is necessary to eliminate a serious and immediate threat to the public health and safety or the common defense and security, and where there are no other mitigating alternatives available to emergency access, would be unlikely. As stated in the "Supplementary Information" accompanying the proposed rule, NRC does not anticipate any situation where a lack of access would create a serious and immediate threat to the public health and safety or the common defense and security, thereby requiring emergency access.

In terms of a hierarchy of waste management options, reduction or elimination of the waste is the preferred waste management option. If LLW is generated, decay in storage is the preferred option, if the half-lives of the radionuclides fall within regulatory guidelines. For those wastes for which decay in storage does not apply, disposal is the preferred option. If access to disposal is not available, and storage is required, centralized storage is preferred. Centralized storage reduces the number of storage sites, thereby reducing the risk of release. In addition, centralized storage would eliminate redundant activities, thus reducing worker exposure. If none of these options is available, on-site storage will be necessary. Emergency access is the option of last resort and it would be considered, as discussed in the preceding paragraph.

4. Comment. Two commenters requested NRC to identify how mixed waste is to be managed after January 1, 1996.

Response. As noted by the commenters, some licensees will need to store LLW that also contains hazardous waste, as specified under the Resource Conservation and Recovery Act, as amended. These mixed wastes, as they are called, are regulated both by NRC - for the radioactive component of the waste - and the EPA - for the hazardous component of the waste. The previously discussed guidance documents apply to the radioactive component of mixed waste. For information on the permitting of storage by EPA, licensees should contact the appropriate EPA regional office or, in those States with approved hazardous waste programs, the appropriate State regulatory authority.

5. Comment. In the "Supplementary Information" accompanying the proposed rule, NRC responded to an Agreement State comment, "It is not envisioned that a State would take possession of LLW at a generator's facility." One commenter requested that this wording should be changed to: "No State shall be required to take possession... ."

Response. The rule would have placed no requirements on the States to take possession of LLW.

6. Comment. One commenter stated that the Commission's financial assurance requirements cited in 10 CFR Parts 30, 40, 50, 70, and 72 are not sufficient, in case of long-term disposal or storage facility failure, and probably not, in case of short-term failure, either. The commenter did not elaborate on these statements.

Response. Financial assurance requirements, for land disposal of LLW, are contained in Part 61. Part 61 is not included in this rulemaking. However, the Commission is currently reviewing the issue of financial assurance for accident cleanup for all radioactive material licensees. Any changes in the regulations that may be necessary will be the subject of a separate rulemaking. The commenter did not identify any specific problems with these financial assurance requirements; therefore, NRC is unable to address specific concerns.

J. Impacts on Licensees and States

1. Comment. One commenter stated that this rule could, at the very least, create unnecessary confusion among LLW generators and the public regarding the specific LLW management responsibilities of States and NRC, under Federal law. The commenter further stated that, at its worse, the rule could seriously jeopardize the regulatory responsibilities of the Agreement States. In Agreement States, State government agencies have the responsibility for regulating the operations of non-utility radioactive material licensees, including the assessment of the ability of any licensee to store LLW safely.

Response. The AEA empowers NRC to relinquish part of its regulatory authority, over source, byproduct, and SNM, to the States. The Agreement State must have a radiation control program that is compatible with NRC's and adequate to protect the public health and safety. NRC retains its authority, under the AEA, to establish rules and orders as it "...may deem necessary or desirable to ... protect health or to minimize danger to life and property." The extent to which these rules must be adopted by the States is determined, by NRC, by the necessary degree of compatibility. This rule has been developed consistent with NRC's authority, under the AEA, and NRC's

compatibility policy. This rule would not change the regulatory responsibilities of the Agreement States and NRC. The Agreement States remain responsible for the regulation of LLW storage, as they determine necessary to protect the public health and safety and the environment, when disposal is not reasonably available. Further, NRC does not believe the rule would create unnecessary confusion, among LLW generators and the public, regarding the specific LLW management responsibilities of States and NRC, because the rule would not change any of these responsibilities.

2. Comment. Two commenters cautioned NRC not to disrupt or endanger the progress made by some compacts, by destabilizing the legislative framework established under the LLRWPA.

Response. This rule is intended to support the goals of the LLRWPA and its legislated preference for disposal over storage of LLW. NRC does not believe that this rule will have any destabilizing effect, because the rule encourages disposal of LLW.

3. Comment. Five commenters stated that NRC should address the cost impact on the generator of this rulemaking.

Response. NRC agrees and has considered the cost impact on generators as part of the "Regulatory Analysis" that accompanied the proposed rulemaking. The analysis may be examined and copied, for a fee, at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC, telephone (202) 634-3273.

4. Comment. One commenter stated that NRC has underestimated the cost impact of this rule. This commenter stated that the number of licensees was underestimated, the analysis failed to account for inflation, and the analysis omitted the Envirocare facility. The commenter provided a cost estimate of \$49 million; however, no details were provided to substantiate this estimate.

Response. NRC disagrees. The "Regulatory Analysis" that accompanied the proposed rule overestimated, rather than underestimated, the number of affected licensees. The burden estimate assumed that all licensees are LLW generators and that all generators ship their waste off-site for disposal. These assumptions built a degree of conservatism into the analysis because, for example, some generators store their waste for decay, rather than dispose of LLW, and some do not generate LLW on a regular basis.

The "Regulatory Analysis" should have noted that the cost estimate is stated in current-year dollars.

The Envirocare facility is licensed to dispose of wastes containing naturally occurring radioactive material (NORM), low-activity radioactive waste, and selected mixed wastes. NORM, other than uranium or thorium (source material) and associated decay products, is not subject to regulation under the AEA and, therefore, NORM is not regulated by NRC. The low-activity radioactive wastes accepted by Envirocare are bulk wastes, such as contaminated soils and debris. The generators of this type of waste do not represent a significant portion of the LLW generators who store on-site and are subject to this rule. Similarly, mixed waste, for which adequate treatment capacity does not currently exist, represents a small fraction of the total LLW generated each year. However,

the "Regulatory Analysis" should have accounted for these small number of generators.

Because the proposed rule is being withdrawn, the "Regulatory Analysis" has not been revised to reflect these changes.

NRC is unable to specifically address the commenter's estimate because no details were provided. However, a similar comment with a response follows in Comment III.J.5, below.

5. Comment. One commenter stated that this rule will cost approximately \$50 million per year for all affected licensees. The commenter references a letter submitted to OMB for the proposed rule. The letter to OMB substantiates this figure based on: (1) the commenter's estimate of the number of affected licensees; (2) inclusion of the Envirocare facility; and (3) inflation.

Response. The commenter's estimate is significantly overstated for two reasons. First, the commenter assumes that all NRC and Agreement State licensees (20,000 by the commenter's estimate) will be impacted by the rule. This is not the case. Only those licensees located in a compact that does not have a disposal facility would be expected to store LLW. According to current schedules and operating plans, the Southeast, Southwestern, and Northwest Compacts are expected to have LLW disposal facilities operating on January 1, 1996. In addition, the Rocky Mountain Compact has a contract with the Northwest Compact for disposal of LLW generated within the Rocky Mountain Compact. Licensees in these compacts are currently shipping their LLW for disposal and are expected to continue to do so. Therefore, NRC would not expect the licensees in the States comprising these four compacts to be impacted by the rule. Of the remaining licensees (approximately 13,000), many store only for decay or do not routinely generate LLW requiring disposal in an LLW disposal facility. Second, the commenter assumes that all licensees would be required to contact the Envirocare facility for possible disposal of their LLW. As discussed in the response to Comment III.J.4, the Envirocare facility accepts only limited types of LLW. NRC would expect only those licensees that generate LLW meeting Envirocare's acceptance criteria to contact this facility.

Although not stated in the "Regulatory Analysis", the figures presented by NRC are stated in current dollars and therefore do not account for inflation.

6. Comment. One commenter stated that the provisions to allow storage on-site after 1996 will lift the burden from the States to continue in the development of a LLRW disposal facility.

Response. As stated in the "Supplementary Information," that accompanied the proposed rule, NRC does not believe that the conditions of the rule in themselves would authorize on-site storage of LLW. Rather, the proposed rule would have placed additional conditions on the storage of LLW. Therefore, the rule would not have the affect stated by the commenter.

7. Comment. One commenter stated that because the rule discourages on-site storage, it is conceivable that public utility commissions might find interim storage ventures imprudent, thereby compromising the ability of licensees to

finance safe management of LLW, by preventing the recovery of construction and operating costs.

Response. The issue of public utility commission rulings on the cost recovery aspects of an on-site LLW storage facility is outside the scope of this rule. However, regardless of the ability to recapture costs, any LLW storage facility must be designed and constructed to ensure the safe handling and storage of LLW.

8. Comment. Three commenters stated that State or Federal authorities should be required to make these requests, instead of shifting the burden of disposal to the generator.

Response. This rule would not shift any State or Federal burden to the generator. The LLRWPA assigns States the responsibility for providing for the disposal of LLW. It is the generator's responsibility to safely manage the LLW in its possession. The generator's responsibilities include arranging for disposal at an available LLW disposal facility.

9. Comment. One commenter stated that on-site storage should not be permitted because so long as the waste remains at a reactor site, the waste and the licensee that handles it are subject to NRC's regulatory control. According to the commenter, this control preempts the authority of the State, which by Federal law is held to be responsible for its disposal, from exercising more restrictive regulatory control.

Response. NRC disagrees with the conclusion that on-site storage should not be permitted at reactor sites. The authorities and responsibilities assigned to NRC and the States are not changed by this rulemaking. NRC regulates the storage of wastes at reactor sites. States are responsible for developing new disposal capacity, under the provisions of the LLRWPA.

K. Other Comments

1. Comment. One commenter stated that the initiation of the Below Regulatory Concern (BRC) concept would be beneficial in reducing the amount of material stored on-site, by allowing waste containing insignificant quantities of radionuclides to be disposed of in sanitary landfills.

Response. NRC formally withdrew its BRC policy statements on radioactive materials on August 24, 1993 (58 FR 44610). This action complied with provisions of the Energy Policy Act of 1992, which revoked the Commission's 1986 and 1990 BRC policy statements, and follows the Commission's 1991 indefinite moratorium on use of these statements.

2. Comment. One commenter stated that the environmental conditions for on-site storage should be addressed.

Response. Environmental conditions that should be addressed for increases in LLW storage capacity are contained in Generic Letter 81-38 and Information Notice 90-09. Licensees may apply and follow the guidance provided in Generic Letter 81-38 and Information Notice 90-09, or they may choose an alternate course of action, as long as the alternative is consistent with established regulations, and provides sufficient information on which to

base a licensing action. NRC will address environmental concerns on a case by case basis during any required licensing actions.

3. Comment. One commenter stated that the statement made in the "Supplementary Information", "Additional disposal capacity is expected soon," is extremely optimistic. Another commenter asked which disposal sites are scheduled to be operational by January 1, 1996.

Response. Based on information supplied by the Host States, new disposal facilities for the Southeast and Southwestern Compacts are scheduled to be operational by January 1, 1996.

4. Comment. One commenter asked if NRC will develop a rule for return of processed waste by materials licensees.

Response. On October 21, 1992, NRC published a final rule amending Part 50 (57 FR 47978) to allow a reactor licensee to receive back byproduct and SNM that is produced by operating the reactor after that material has been sent off-site for processing. Reactor licensees had reported that processor licensees were unwilling to accept reactor-generated waste without some assurance that reactor licensees would be authorized to receive back processed LLW initially generated at the reactor facility. Currently, no problems have been identified concerning Parts 30, 40, 70, and 72 licensees and the return of processed LLW to their facilities, because of differences between the terms and conditions in power reactor and materials licenses. The Commission can address this issue in the future, if these licensees encounter problems in this area.

5. Comment. One commenter stated that the verification of safely storing LLW should be handled during the annual radiation protection inspections.

Response. The inspection of LLW storage practices will continue to be accomplished during both scheduled and unscheduled inspections, as required, to verify compliance and continued safety.

6. Comment. One commenter stated that a better reading of New York v. United States leads to the conclusion that the take-title provision was voided in all applications, compact and non-compact. This commenter requested NRC to review its position on the applicability of this case.

Response. NRC's position continues to be that the constitutionality of the take-title provision, as applied to compact States, was not before the Supreme Court.

7. Comment. One commenter stated that NRC should establish a date certain for review of the storage situation. This commenter further stated that this date should be tied to the expected integrity of the waste containers as well as scaled in relation to the expected solvency of the generators.

Response. Because LLW storage conditions will vary from licensee to licensee, NRC will review LLW storage practices, as required, on a case-by-case basis. The licensee is responsible for ensuring safety and, as part of the review of any license application for storage or license renewal, NRC or the Agreement State regulatory agency, will address conditions necessary for

on-site storage.

8. Comment. Waste manifests should be prepared before placing waste/materials in storage, thereby creating an inventory of stored materials.

Response. NRC agrees that an inventory of stored materials should be kept to ensure that possession limits imposed by individual licenses are not exceeded and to characterize the waste when it is shipped for disposal. NRC also agrees that the manifest should normally be prepared before placing LLW that is ready for shipment in storage at the originating licensee's facility. This issue is also being addressed in the ongoing "Uniform Manifest" rulemaking (57 FR 14500, April 21, 1992).

9. Comment. One commenter asked if NRC intends to disallow LLW disposal facility designs other than shallow land burial.

Response. NRC's regulations do not prohibit any specific facility designs for land disposal of LLW, and no such prohibitions are planned. Disposal site design requirements for near-surface disposal are contained in 10 CFR 61.51. Near-surface disposal includes methods such as shallow land burial, below-ground vaults, and earth-mounded concrete bunkers.

10. Comment. One commenter stated that the 12 hours stated in the Paperwork Reduction Act Statement does not come close to the time burden associated with responding to this notice.

Response. The time estimate stated in the Paperwork Reduction Act Statement only covers the burden imposed on the licensees to comply with the reporting and recordkeeping requirements of the rule. The estimate is not intended or required to include the burden associated with responding to the notice of proposed rulemaking.

11. Comment. One commenter expressed concern with possible environmental racism. The commenter stated that the United Church of Christ has done extensive studies via their Commission for Racial Justice. According to the commenter, their reports show a disproportionate impact of industrial facilities on people of racial or ethnic minorities. The case could be made that since storage of waste will primarily affect those populations close at hand, the proposed rule may be perpetuating an environmentally racist policy structure. The commenter provided no further support for this argument.

Response. The Commission is currently reviewing how the issue of environmental justice should be addressed in the NRC's regulatory process.

Staff Note: The staff is currently reviewing a draft Executive Order on this topic.

12. Comment. One commenter suggested that LLW from other generators should be stored at nuclear power plants that already store HLW. This commenter argued that this practice would have little environmental impact on the nuclear power plant and would make unnecessary the radioactive contamination of a previously clean area.

Response. NRC has established guidance concerning the commercial storage of non-utility LLW at nuclear power plant sites. This guidance is contained in Generic Letter 85-14. As stated in this generic letter, NRC is opposed to any activity at a nuclear reactor site which is not generally supportive of activities authorized by the operating license or construction permit and that may divert the attention of licensee management from its primary task of safe operation or construction of the power reactor.

13. Comment. One commenter suggested export of LLW as an alternative to storage.

Response. Presently, NRC's import and export licensing requirements are primarily concerned with nuclear proliferation controls. Radioactive materials of little or no significance, with respect to national security, are currently allowed to enter and leave the United States under general import and export licenses. Thus, currently, imports or exports of nuclear waste may take place without issuance of a specific license by NRC, and without NRC's knowledge. NRC regulations concerning the export of LLW are contained in 10 CFR 110, "Export and Import of Nuclear Equipment and Material." NRC proposed amendments to these regulations on April 28, 1992 (57 FR 17859). The revised regulations would conform U.S. policies to international recommendations and require specific licensing of such imports and exports, thereby strengthening NRC controls over radioactive waste entering and leaving the United States. The point of contact for further information about the rulemaking on the import and export of radioactive wastes is Ronald Hauber, Office of International Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 504-2344.

14. Comment. Three commenters recommended that all activity that generates nuclear waste should be suspended as soon as possible. One commenter recommended that NRC declare a temporary moratorium on the generation of additional radioactive waste by all major LLW generators until such time that LLW disposal facilities can be sited, constructed, and licensed for operation safely enough to protect public health and safety and the environment.

Response. Congress has determined that the safe use of nuclear materials for peaceful purposes is a legitimate and important national goal. It has entrusted NRC with the primary Federal responsibility for achieving that goal. NRC's mission, therefore, is to ensure adequate protection for the public health and safety, the common defense and security, and the environment, in the use of nuclear materials in the United States. An unavoidable byproduct of some uses of nuclear materials is the generation of nuclear waste. LLW is generated by such beneficial activities as power generation and the associated fuel cycle; medical research, diagnosis, and therapy; academic course work and research; and industrial applications such as radiography, gauging devices, gas chromatography, well logging, and smoke detectors. To carry out its mission, NRC has developed and implemented regulations, regulatory guidance, and inspection procedures. The elements of NRC's regulatory program associated with the storage and disposal of LLW have been discussed in response to other comments. This regulatory program, in conjunction with vigilant management and operation by licensees, in compliance with this program, will ensure that NRC's mission is achieved and that the nation can continue to benefit from the safe use of nuclear materials. In response to specific concerns about LLW disposal facilities, NRC notes that

new disposal facilities that comply with Part 61, or compatible Agreement State regulations, will ensure protection of the public health and safety and the environment. The operating disposal facilities in Richland, Washington, and Barnwell, South Carolina, in addition to the facility in Beatty, Nevada, which stopped accepting LLW on January 1, 1993, were licensed before the development of Part 61. These facilities have been safely operating and disposing of LLW for decades.

15. Comment. One commenter recommended that the Program for Elimination of Requirements Marginal to Safety should itself be eliminated. This commenter asserted that this program is driven by commercial licensees whose deficiencies are reported in NUREG/CR-4062. This commenter found an inconsistency between the proposed rule and the program, noting that the proposed rule and the program have been undertaken even though, according to the commenter, the recent past and statements of the NRC show that regulation related to safety is inadequate. The commenter did not elaborate on this latter statement.

Response. The Program for Elimination of Requirements Marginal to Safety has been initiated, to identify, assess, and eliminate regulatory requirements that have marginal importance to safety and yet impose a regulatory burden on licensees. This initiative was announced in the Federal Register on February 4, 1992 (57 FR 4166), and public comments were solicited. Public comments were addressed in SECY-92-263, "Staff Plans for Elimination of Requirements Marginal to Safety," dated July 24, 1992. The staff proposed its plans for this program in SECY-92-263, "Elimination of Requirements Marginal to Safety," dated February 5, 1993. The plans included initiating, and subsequently institutionalizing, by permanently integrating into the regulatory process, an ongoing effort to eliminate requirements marginal to safety and reduce regulatory burden. In response to the commenter's concerns, the program is not driven by commercial licensees. The program was initiated by NRC and is intended to be an ongoing program. Further, the contractor-prepared report, NUREG/CR-4062, identifies potential problems with extended storage of LLW, but does not address licensee deficiencies. Because the commenter did not provide any substantiation for the claim that regulations related to safety are inadequate, NRC cannot provide a specific response. NRC believes that its regulations are adequate.

16. Comment. One commenter stated that neither the Davis Besse nor Perry nuclear power plants in Ohio are suitable locations for extended at-reactor storage of LLW and could, in fact, become permanent.

Response. The issues of the suitability of specific power reactor sites for on-site storage, and the potential duration of storage at those sites, are outside the scope of this rulemaking. However, licensees are required to perform a safety assessment under 10 CFR 50.59, to document the safety of the operation of additional LLW storage facilities. It is not NRC's intent that on-site storage facilities become permanent.

17. Comment. Several comments submitted by one commenter go beyond the scope of this rulemaking or NRC's mission. This commenter stated that nuclear testing should be discontinued, siting activities at Yucca Mountain should be terminated, and the monitored retrievable storage (MRS) program should be discontinued. The commenter did not provide an argument supporting the first

two positions. Concerning MRS, the commenter stated that power reactors can store or expand storage for fuel rods on-site.

Response. Nuclear weapons testing is neither conducted nor regulated by NRC. Congress has not assigned NRC either of these roles. However, organizations licensed by NRC and Agreement States do use radioisotopes in performing medical, pharmaceutical, academic, and industrial research. NRC's mission in regulating these beneficial uses of radioactive material is discussed in the responses to Comments III.H.3 and III.K.14.

The MRS program, Yucca Mountain siting activities, and related NRC and DOE responsibilities were prescribed by Congress in the Nuclear Waste Policy Act of 1982, as amended. Congress determined that long-term storage of HLW or spent nuclear fuel in MRS facilities is an option for providing safe and reliable management of such waste, and that the Federal government has the responsibility to provide for interim storage of spent nuclear fuel for civilian power reactors that cannot reasonably provide adequate storage capacity at their sites. Further, Congress determined that the Federal Government has the responsibility to provide for the permanent disposal of HLW and spent nuclear fuel. Congress specifically directed that HLW repository siting activities be constrained to the Yucca Mountain site. DOE is responsible for developing the MRS and the high-level waste repository at Yucca Mountain. NRC is responsible for regulating these activities.

TEXT OF THE PROPOSED RULE
TO REVISE 10 CFR 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

The following requirements were proposed to be added to the "License conditions" section of each of the affected 10 CFR Parts:

The following conditions are contained in every license issued under the regulations in this part.

- (1) Low-level radioactive waste (LLW) may be stored on-site, provided it is authorized under existing conditions of the license, and storage is consistent with existing authorities and procedures, and all relevant licensing and regulatory requirements applicable to on-site storage. LLW may not be stored on-site by the generator beyond January 1, 1996, except as specified in paragraph (2) of this section.
- (2) For on-site storage (other than short-term storage necessary for decay or for collection and consolidation for shipment off-site in the case where the licensee has access to an operating LLW disposal facility) the licensee shall document that the licensee has exhausted other reasonable waste management options which would include taking all reasonable steps to contract, either directly or through the State, for disposal of LLW.
- (3) The licensee shall retain all relevant documentation regarding the actions taken pursuant to paragraph (2) of this section, for at least three years, and shall make the documentation available for NRC inspection.

In addition, a change unique to Part 50 was proposed which would add the following requirement to paragraph (2) of the affected section.

- On-site storage activities will be consistent with, and not compromise, safe operations of the licensee's activities, nor decrease the level of safety provided by applicable regulatory requirements.

Finally, because of the new information collection requirement, a change was proposed for 10 CFR 40.8, "Information collection requirements: OMB approval," to add the affected Part 40 section to the list of approved information collection requirements. The sections of 10 CFR 30, 50, 70, and 72, proposed to be changed, already had approved information collection requirements. Therefore, a similar change was not required for these Parts.

**LIST OF COMMENTERS ON THE PROPOSED RULEMAKING
TO REVISE 10 CFR PARTS 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE**

LIST OF COMMENTERS ON THE PROPOSED RULEMAKING
TO REVISE 10 CFR PARTS 30, 40, 50, 70, AND 72
FOR ON-SITE STORAGE OF LOW-LEVEL RADIOACTIVE WASTE

<u>Responder</u>	<u>Author</u>	<u>Date</u>	<u>Response No.</u>
<u>State Organizations/Offices (7)</u>			
Minnesota Department of Health, Division of Environmental Health	Larry D. Souther, Health Radiation Control Manager	3/15/93	2
Florida Department of Health and Rehabilitative Services, Office of Radiation Control	Gary L. Tomaszewski, Acting Chief	3/16/93	3
Wisconsin Department of Health and Social Services, Radiation Protection Unit	Paul Schmidt, Manager	3/25/93	9
New York State Energy Office	Eugene J. Gleason, Dep. Commissioner for Operations	4/1/93	11
Vermont Agency of Natural Resources, Office of the State Geologist	Diane Conrad, State Geologist & Director LLW Management Program	Undated	41
Illinois Department of Nuclear Safety	Thomas W. Ortciger, Director	4/7/93	48
State of Nebraska	E. Benjamin Nelson, Governor	4/13/93	53
<u>Local Government Offices (1)</u>			
Cortland County (New York) Low- Level Radioactive Waste Office	Denise Cote- Hopkins, Assistant LLRW Coordinator	4/12/93	51
<u>Generators (Utilities) (21)</u>			
Arizona Public Service Company	W. F. Conway	3/12/93	4
Indiana Michigan Power Company	E. E. Fitzpatrick, Vice President	3/26/93	10

North Atlantic Energy Service Corporation	Ted C. Feigenbaum	4/2/93	16
Rochester Gas and Electric Corporation	Robert C. Mecredy, Vice President	3/30/93	21
Southern Nuclear Operating Company	J. D. Woodard, Vice President	4/1/93	22
Florida Power and Light	R. E. Grazio, Director, Nuclear Licensing	4/1/93	23
Georgia Power Company	J. T. Beckham, Jr., Vice President	4/2/93	24
Nebraska Public Power District	G. R. Horn, Nuclear Power Group Manager	4/5/93	28
New York Power Authority	Ralph E. Beedle	4/5/93	29
Yankee Atomic Electric Company	D. W. Edwards, Industry Affairs	4/2/93	31
Winston & Strawn (on behalf of Commonwealth Edison Company, Niagara Mohawk Power Corporation, the Tennessee Valley Authority, TU Electric, and the Washington Public Power Supply System)	Mark J. Wetterhahn Anne W. Cottingham Mark J. Hedian	4/6/93	35
Virginia Power	M. L. Bowling, Manager, Nuclear Licensing and Programs	4/5/93	38
Consumers Power	M. A. Hobe, Nuclear Liaison Administrator	4/5/93	39
Northeast Utilities	for J. F. Opeka, Executive Vice President by W. D. Romberg, Vice President	4/6/93	40
Boston Edison	E. T. Boulette, Senior Vice President	4/5/93	42

Washington Public Power Supply System	G. C. Sorensen, Manager, Regulatory Programs	4/1/93	44
South Carolina Electric and Gas	John L. Skolds, Vice President	4/5/93	46
Centerior Energy	Donald C. Shelton, Vice President	4/5/93	47
GPU Nuclear Corporation	J. C. Fornicola, Licensing and Regulatory Affairs	4/7/93	49
Maine Yankee	Leann R. Diehl, Manager, Public and Government Affairs	4/9/93	50
Duke Power	Hal B. Tucker, Senior Vice President	4/5/93	52
<u>Generators (Non-Utility) (9)</u>			
William Beaumont Hospital Royal Oak, MI	Cheryl Culver, Medical Physicist	3/11/93	1
Albert Einstein College of Medicine of Yeshiva Univ., Bronx, NY	George Hamawy, Radiation Safety Officer (RSO)	3/24/93	6
Henry Ford Hospital, Detroit, MI	Ralph P. Lieto, RSO	3/24/93	7
Allied Signal, Morristown, NJ	W. Scott Nix, Vice President	3/26/93	8
Yale University, New Haven, CT	Stan Mavrogianis, Manager Hazardous Waste Management	4/1/93	14
University of Connecticut Health Center, Farmington, CT	Kenneth W. Price, RSO	4/2/93	15
National Institutes of Health, Bethesda, MD	William J. Walker, RSO	4/5/93	18
Hybritech, San Diego, CA	Steve Bursik, Asst RSO	4/2/93	25

University of California, Los Angeles	Carol S. Marcus, Director, Nuclear Medicine Outpatient Clinic	4/2/93	26
---------------------------------------	--	--------	----

Generators (User Groups) (5)

Edison Electric Institute	David L. Swanson, Senior Vice President	4/5/93	30
---------------------------	---	--------	----

Winston & Strawn (on behalf of the Nuclear Utility Backfitting and Reform Group (NUBARG))	Nicholas S. Reynolds, Daniel F. Stenger, & Mark J. Hedien, Counsel to NUBARG	4/5/93	20
---	--	--------	----

Michigan Coalition of Radioactive Material Users, Inc.	William R. Lukens, Executive Director	3/23/93	5
--	--	---------	---

American College of Nuclear Physicians	Conrad E. Nagle, President and Paul H. Murphy, President, Society of Nuclear Medicine	4/2/93	17
--	--	--------	----

U.S. Council for Energy Awareness	Marvin S. Fertel, Vice President	4/5/93	19
-----------------------------------	-------------------------------------	--------	----

Disposal Facility Operator (1)

US Ecology	Ronald K. Gaynor, Vice President	4/8/93	43
------------	-------------------------------------	--------	----

Public Interest Groups (7)

Nuclear Information and Resource Service, Washington, DC	Mary Olson	4/4/93	27
--	------------	--------	----

Public Citizen, Washington, DC	James P. Riccio, Energy Campaigner	4/5/93	32
--------------------------------	---------------------------------------	--------	----

Ohio Sierra Club, Willoughby Hills, OH	Connie Kline	Date Obscured	33
--	--------------	---------------	----

Ohio Citizens for Responsible Energy, Inc., Mentor, OH	Susan L. Hiatt, Director	4/5/93	34
--	-----------------------------	--------	----

Don't Waste New York, Norwich, NY	Susan B. Griffin	4/3/93	37
-----------------------------------	------------------	--------	----

Environmental Coalition on Nuclear Power, State College, PA	Judith H. Johnsrud, Director	4/2/93	45
New England Coalition on Nuclear Pollution, Inc., Brattleboro, VT	John Greenberg, Trustee	4/21/93	54
<u>Individuals (4)</u>			
David C. Gerber, Marathon, NY		3/30/93	12
Edward L. Gershey, Esmerelda Party, & Amy Wilkerson, New York, NY		3/31/93	13
Marvin I. Lewis, Philadelphia, PA		4/4/93	36
Joan Edwards, Salt Lake City, UT		5/5/93	55