

**NUCLEAR REGULATORY COMMISSION**

**10 CFR Part 72**

**RIN: 3150-AI09**

**[NRC-2008-0361]**

**License and Certificate of Compliance Terms**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC or the Commission) is amending its regulations that govern licensing requirements for the independent storage of spent nuclear fuel. These amendments include changes that enhance the effectiveness and efficiency of the licensing process for spent nuclear fuel storage. Specifically, they extend and clarify the term limits for storage cask Certificates of Compliance (CoCs) and independent spent fuel storage installation (ISFSI) specific licenses. The amendments also provide consistency between the general and specific ISFSI license requirements, and allow general licensees subject to these regulations to implement changes authorized by an amended CoC to a cask loaded under the initial CoC or an earlier amended CoC (a “previously loaded cask”).

**DATES:** *Effective Date:* This final rule is effective on **insert 90 days from date of publication.**

**ADDRESSES:** You can access publicly available documents related to this document using the following methods:

**Federal rulemaking Web site:** Go to <http://www.regulations.gov> and search for documents filed under Docket ID NRC-2008-0361. Address questions about NRC dockets to Carol Gallagher at 301-492-3668; e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).

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## **I. Background**

On April 29, 2002, the Virginia Power and Electric Company (Dominion) submitted an application to renew Special Nuclear Materials (SNM) License SNM-2501 for the Surry ISFSI. SNM-2501 authorizes the storage of spent nuclear fuel in casks at the Surry Nuclear Power Plant. In the renewal application, Dominion requested an exemption from the 20-year license renewal term specified in 10 CFR 72.42(a) and sought approval for a 40-year license renewal term. Similarly, on February 27, 2004, Progress Energy Carolinas, Inc. submitted an application for the renewal of H. B. Robinson's ISFSI license which requested an exemption from the provisions of § 72.42(a), so that the license renewal period for the H. B. Robinson's ISFSI could be extended from 20 to 40 years.

The NRC staff determined the 40-year renewal exemption request to be a policy decision, not a technical one, because the safety evaluation indicated sufficient technical information had been provided in the application to grant the 40-year renewal period. As a result, a Commission paper (SECY-04-0175) entitled, "Options for Addressing the Surry

Independent Spent Fuel Storage Installation License-Renewal Period Exemption Request,” was submitted on September 28, 2004, to request Commission approval of the Surry 40-year renewal exemption request.

On November 29, 2004, the Commission issued a Staff Requirements Memorandum (SRM) for SECY-04-0175, which authorized the NRC staff to approve a 40-year license renewal term for the Surry ISFSI, with appropriate license conditions to manage the effects of aging. The SRM further directed the NRC staff to: (1) initiate a program to review the technical basis for future rulemaking; (2) provide recommendations on the license term for Part 72 CoCs for spent nuclear fuel cask storage systems; and (3) apply the Commission-approved guidance for Part 72 renewals to future specific license exemption requests without further Commission approval. In response to this direction, the staff submitted a Commission paper (SECY-06-0152) entitled, “Title 10 *Code of Federal Regulations* Part 72 License and Certificate of Compliance Terms,” on July 7, 2006, to recommend the scope of rulemaking.

In an SRM, dated August 14, 2006, the Commission authorized the staff to proceed with rulemaking proposals described in SECY-06-0152. In addition, the Commission specifically directed the staff to address the following points in the rulemaking: (1) clarify the start of the 20-year term limit for cask designs approved under general license provisions; (2) identify whether the cask vendor or licensee is responsible for applying for the CoC renewals; (3) discuss possible conflicts that could arise for storage cask designs that are granted a license term extension and that have been approved for transport with a different license term; (4) discuss how the cask expiration dates are tracked at each general license site so that it is clearly understood when the CoC for each cask design must be renewed; and (5) clarify the difference between CoC “approval” and “renewal.”

As this rulemaking commenced, the NRC staff identified a related issue regarding its approval of Amendment 4 to CoC 72-1026, which revised cask monitoring and surveillance requirements for the BNG Fuel Solutions W-150 storage cask. Subsequent to the approval, the certificate holder requested guidance from the NRC on the implementation of the changes authorized by the CoC amendment to previously loaded casks. In addition to this request, the NRC staff became aware of the belief among some general licensees that changes authorized by CoC amendments can be applied to previously loaded casks without prior NRC approval, if an analysis under § 72.48 is performed.

The NRC staff determined that under the current regulations, changes authorized by CoC amendments cannot be applied to previously loaded casks without express NRC approval, if such change results in a change to the terms or conditions of the CoC under which the cask was loaded. A previously loaded cask is bound by the terms and conditions (including the technical specifications) of the CoC applicable to that cask when the licensee loaded the cask. Therefore, under the current regulations, general licensees that want to apply changes approved by a CoC amendment to a previously loaded cask must request an exemption from the NRC if these changes alter the terms or conditions of the CoC under which that cask was loaded.

In the SRM for COMSECY-07-0032, dated December 12, 2007, the Commission stated that it did not object to the staff expanding the scope of the proposed rulemaking to include the following two issues: (1) to extend the terms of specific ISFSI licenses, for both initial and renewal terms, to not to exceed 40 years; and (2) to allow a general licensee to apply changes for a CoC amendment to a previously loaded cask without express NRC approval, while still ensuring that this action protects public health and safety.

In the August 14, 2006, SRM for SECY-06-0152, the Commission directed the NRC staff to be as transparent as possible in developing the proposed rule package, including making draft text available for comment to stakeholders, and holding public meetings, if necessary, before formal submission of the proposed rule to the Commission. In response, the NRC staff held public meetings on November 7, 2006, and February 29, 2008, to discuss the technical basis of the rulemaking with stakeholders. In addition, on August 4, 2008, the NRC staff made preliminary draft rule text available for comment to stakeholders on Regulations.gov (Docket ID NRC-2008-0361). The only external stakeholders that submitted comments were the Nuclear Energy Institute and Florida Power and Light. The comments generally supported the rulemaking. The “Discussion” section of this document includes NRC responses to significant stakeholder comments.

The NRC published the proposed rule, “License and Certificate of Compliance Terms” in the *Federal Register* on September 15, 2009 (74 FR 47126), for public comment. The NRC received five comment letters on the proposed rule. These comments and the NRC responses are discussed in Section III of this document, “Summary and Analysis of Public Comments on the Proposed Rule.”

## **II. Discussion**

### *A. What action is the NRC taking, and why?*

The NRC is revising Part 72 requirements for specific and general ISFSI licensees and Part 72 requirements pertaining to CoCs to enhance the effectiveness and efficiency of the licensing process.

For specific ISFSI licenses, the Commission is codifying a technical approach consistent with that applied in granting the 40-year exemptions for the Surry and H. B. Robinson specific ISFSI license renewals, so that all specific ISFSI licensees will have the flexibility to request initial and renewal terms not to exceed 40 years while ensuring safe and secure storage of spent nuclear fuel.

For CoCs, the Commission is also allowing the flexibility for CoC applicants and CoC holders to request, respectively, initial terms and renewal terms not to exceed 40 years. The response to Question “C” of this section discusses the technical basis for this change. Under this change, applicants and CoC holders will be required to demonstrate that design and operational programs are suitable for the requested term. The NRC staff has developed a standard review plan (SRP) for renewal applications. The final rule amendments also clarify the term (length) of the general license, particularly as the general license term relates to CoC renewals (see the response to Question “I” of this section for further detail).

For both specific licenses and CoCs, the final rule adds a requirement that renewal applicants must provide TLAAs and a description of an AMP (see the responses to Questions “F”, “G”, and “H”) to ensure that storage casks will perform as designed under extended license terms.

The NRC is replacing the term “reapproval,” which is used to describe the process of extending the CoC terms, to “renewal” for consistency with specific license terminology. Question “E” of this section discusses the rationale for this change.

The final rule will also allow general licensees to implement changes authorized by a CoC amendment to a previously loaded cask, provided that the loaded cask then conforms to the CoC amendment codified by the NRC in § 72.214 and thus, continues to ensure the safe and secure storage of spent nuclear fuel. Question “N” of this section discusses the rationale for this change.

*B. Whom does this action affect?*

The final rule will affect Part 72 specific and general licensees and CoC holders and applicants for a CoC.

*C. Why is the NRC increasing initial terms and renewal terms for specific ISFSI licenses from not to exceed 20 years to not to exceed 40 years?*

The NRC is amending § 72.42 to increase the initial terms and renewal terms for specific ISFSI licenses from not to exceed 20 years to not to exceed 40 years. This increase is consistent with the NRC staff's findings regarding the safety of spent nuclear fuel storage, as documented in the renewal exemptions issued to the Surry and H. B. Robinson ISFSIs. During the review for the Surry and H. B. Robinson renewal applications, the NRC staff evaluated the technical data resulting from an NRC-supported research program at the Idaho National Laboratory (INL), formerly Idaho National Engineering and Environmental Laboratory, and also considered experience with spent fuel storage casks used at Surry. Under the INL research program, INL opened a storage cask after the fuel had been stored for approximately 15 years. At Surry, several casks were also opened after less than 15 years of storage as a result of some faulty weather covers, which were corrected. Summaries of the findings regarding the condition of the fuel and cask components follow:

(1) Cladding creep is a time-dependent change in the dimension of the cladding resulting from high temperature and stress. It was considered as a potential degradation mechanism during storage. Confirmatory inspection of the spent fuel stored at INL verified that no cladding creep had occurred. The spent fuel in storage at Surry also supports this finding. The NRC staff expects very little to no fuel degradation at the end of an extended licensing period. The established limits for cladding temperature during storage accompanied by a

continually decreasing level of cladding stress and temperature, further remove creep as a degradation mechanism. Assessment of these factors indicates that cladding creep will not be an issue during a 40 year term.

(2) The NRC staff also expects limited degradation of other internal components because there are no significant corrosive influences in the inert environment, either for the fuel or for other components. The INL inspection verified that there was no indication of corrosion for any internal canister components. The NRC staff has also concluded that radiation levels are too low to significantly alter the properties of the metals for any storage canister components.

(3) The other external components of the storage systems (which are exposed to weathering effects) would already be covered by an inspection and corrective action program, or routine maintenance, to ensure that any degradation will be identified and assessed for its importance to safety, and will be addressed through corrective actions to ensure continued safe operation of the storage system.

Based on these findings, the Commission concludes that, with appropriate aging management and maintenance programs, license terms not to exceed 40 years are reasonable and protect public health and safety.

*D. Can applicants apply for an initial term or renewal term greater than 40 years?*

This final rule amends § 72.42 by extending the term allowed for specific ISFSI licenses from not to exceed 20 years to not to exceed 40 years. This extension applies to both the initial terms and renewal terms. Any request for a term greater than 40 years would be processed as an exemption under § 72.7. The NRC does not plan to ordinarily grant license term requests for greater than 40 years. As discussed in Question “C” of this section, the NRC believes that

terms that do not exceed 40 years are reasonable and provide adequate protection of public health and safety, if the applicant demonstrates to the NRC appropriate aging management and maintenance programs.

If an applicant requests a specific license term greater than 40 years, that applicant would have to provide information on the long-term material degradation of spent fuel storage casks, as well as associated aging management activities, to justify safe operation during such an extended period, and the NRC would need to evaluate this information.

*E. Why is the NRC changing the word “reapproval” to “renewal”?*

The NRC is changing the word “reapproval” to “renewal” in the final rule to be consistent with the terminology used in other license requirements under Part 72. Currently, § 72.240 uses “reapproval” to describe the process of extending the terms of CoCs. However, this terminology differs from other sections in Part 72. For example, § 72.42 uses the word “renewal” to define the process for extending the term of specific ISFSI licenses, and § 72.212(a)(3) uses “renewals” to define the process for the continued use of storage casks of a particular design under a general license. Although “reapproval” and “renewal” are similar words, they are subject to different regulatory interpretations. “Renewal” typically implies a process whereby the term of an existing license or CoC is extended. As such, a renewal reaffirms the original design basis, perhaps with some modifications. “Reapproval,” on the other hand, implies a process to reevaluate the original design basis in accordance with current review standards, which may be different from the standards in place when the cask design was initially certified.

In addition, the Statements of Consideration (SOC) for the final rule (55 FR 29184; July 18, 1990) that added the general license provisions to Part 72 stated that “the procedure for reapproval of cask designs was not intended to repeat all the analyses required for the

original approval.” The referenced SOC also reported that, “the Commission believes that the staff should review spent fuel storage cask designs periodically to consider any new information, either generic to spent fuel storage or specific cask designs, that may have arisen since issuance of the Certificate of Compliance.” Clearly, measures would need to be taken if the “new information” involves safety concerns. These measures would depend on the nature of the safety concerns and the cask design. Requests for Additional Information (RAIs) may be generated during the renewal process to prompt applicants for CoC renewals to address such safety concerns.

The NRC recognizes that a cask design certified years ago may not meet the latest standards, yet that design may be fully acceptable to continue to store spent fuel already loaded into casks of that design. If the cask design were subject to a reapproval process, and as such, to current standards, there is the possibility that certain components of the original design would not meet the current standards. Under this scenario, general licensees would be forced to remove the cask from service and repackage the spent fuel. Obviously, there are significant safety considerations if spent fuel were to be repackaged. When considering repackaging, safety considerations associated with the repackaging operation should be weighed against any safety concerns with leaving the spent fuel in its existing storage container. Although the NRC continuously updates its review standards, no compelling safety concerns have been identified to date that warrant the removal of spent fuel from a cask design that does not meet the latest review standards.

Thus, the NRC concludes that the review of extending the term of a currently approved cask design is more in the nature of a renewal, because it is based on the cask design standards in effect at the time the CoC was approved, rather than a reapproval, which is based

on the current standards. By replacing the word “reapproval” with the word “renewal,” the final rule revisions will remove ambiguity from the process for extending the terms of CoCs.

*F. Why is the NRC adding a definition for the term “time-limited aging analyses” (TLAAs)?*

Stakeholders asked for a definition of TLAAs when they reviewed the initial guidance document for the Surry and H. B. Robinson specific ISFSI license renewals. TLAA is a process to assess systems, structures, and components (SSCs) important to safety which have a time-dependent operating life. This final rule adds a definition of TLAA to the Part 72 definitions section, § 72.3, and makes revisions to §§ 72.42(a)(1) and 72.240(c)(2), respectively, because TLAAs will be required for the renewal of a specific license and for the renewal of a spent fuel storage cask CoC.

*G. What is an “aging management program” (AMP)?*

An AMP is a program for addressing aging effects that may include prevention, mitigation, condition monitoring, and performance monitoring. The final rule adds a definition of AMP to the Part 72 definitions section, § 72.3, because SSCs must be evaluated to demonstrate that aging effects will not compromise the SSCs’ intended functions during the renewal period.

*H. Why is the NRC requiring an AMP?*

The NRC is amending §§ 72.42 and 72.240 to require that applicants for specific license and CoC renewals describe a program, in their applications, for the management of issues associated with aging that could adversely affect SSCs. In this regard, degradation of the SSCs at an ISFSI, such as degradation due to corrosion and radiation, are time-dependent

mechanisms and are expected to be addressed in renewal applications. AMP requirements will ensure that SSCs will perform as designers intended during the renewal period. AMP requirements will be reflected in the terms, conditions and technical specifications of the renewed CoC and thus made applicable to the general licensee per § 72.212(b). For specific licensees, AMP requirements will be reflected in the terms and conditions of the renewed specific license.

*I. Why is the NRC changing the 20-year general license term for cask designs approved for use under the general license provisions? When would a general license term begin and end?*

The final rule changes the 20-year general license term limit for the storage of spent fuel in casks fabricated under a CoC to be consistent with the revisions to CoC initial and renewal terms (which establish a CoC term not to exceed 40 years).

Under § 72.210, a general license for the storage of spent fuel in an ISFSI at power reactor sites is issued to those persons authorized to possess or operate nuclear power reactors under 10 CFR Parts 50 or 52. The general license is limited to that spent fuel which the general licensee is authorized to possess at the site under the Part 50 or 52 license for the site. The general license is further limited to storage of spent fuel in casks approved and fabricated under the provisions of Subpart L of Part 72; the approved cask designs are listed in § 72.214. Currently, the general licensee's authority to use a particular cask design under an approved CoC terminates 20 years after the date that the general licensee first uses the particular cask to store spent fuel, unless the cask's CoC is renewed, in which case the general license terminates 20 years after the CoC renewal date. In the event the cask's CoC were to expire, any loaded spent fuel storage casks of that design will need to be removed from service after a storage period not to exceed 20 years.

This final rule amends §§ 72.3 and 72.212(a)(3) to clarify the term of the general license and to match the term of the general license to the term of the applicable CoC. The final rule also amends § 72.3 by adding a definition for the phrase “the term certified by the cask’s Certificate of Compliance,” which is defined to mean, for a CoC that is not renewed, the period of time commencing with the CoC effective date and ending with the CoC expiration date, and for a renewed CoC, the period of time commencing with the most recent CoC renewal date and ending with the CoC expiration date.

The final rule amends § 72.212(a)(3) to clarify that the term of the general license runs through any renewal periods, unless otherwise specified in the CoC. In addition, the final rule also amends § 72.212(a)(3) to clarify that the general license term for those casks placed into service during the final renewal term of a CoC (i.e., during the CoC term immediately preceding the expiration of the CoC), or similarly, during the term of a CoC that is not renewed, begins when the cask is first used (i.e., when the cask is loaded with spent fuel) and expires after a storage period not to exceed the length of “the term certified by the cask’s Certificate of Compliance.”

The following scenarios are provided as illustrative examples:

Scenario 1: The CoC has a term of 20 years. The general licensee places a cask into service at the end of the 19<sup>th</sup> year of the CoC term. The CoC is not renewed and expires at the end of the 20<sup>th</sup> year; that is 1 year after the general licensee loaded the cask. The term of a general license for a cask shall be for a storage period not to exceed the term certified by the cask’s CoC (i.e., for a CoC that is not renewed, the period of time commencing with the CoC effective date and ending with the CoC expiration date). Thus, in this scenario, the general license commences upon loading at the end of the 19<sup>th</sup> year and runs for 20 years (terminating 19 years after the date of the CoC expiration, giving a storage period of 20 years).

Scenario 2: The initial CoC has a term of 20 years. The CoC is renewed (by rulemaking amending the appropriate entry in § 72.214) for 40 years. The general licensee places a cask into service at the end of the 39<sup>th</sup> year of the renewal term. The CoC is not renewed a second time and as such, expires 40 years after the effective date of the renewal amendment to § 72.214 (here, 1 year after the general licensee loaded the cask). The term of a general license for a cask shall be for a storage period not to exceed the term certified by the cask's CoC (i.e., for a renewed CoC, that is the period of time commencing with the most recent CoC renewal date and ending with the CoC expiration date). Thus, in this scenario, the term of the general license for the cask would commence upon loading and terminate 40 years after loading (in this case, 39 years after expiration of the CoC, giving a storage period of 40 years).

Scenario 3: The initial CoC has a term of 20 years. The CoC is then renewed for 40 years. The general licensee places a cask into service at the end of the 39<sup>th</sup> year of the renewal term. The CoC is then renewed a second time for an additional 40 years. In this case, the general license would run through the second renewal period. Thus, the general license for that cask would commence upon loading and terminate at the expiration of the CoC (giving a storage period of 41 years).

Scenario 4: The initial CoC has a term of 20 years. The CoC is then renewed for 40 years. The general licensee places a cask into service at the end of the 39<sup>th</sup> year of the renewal term. The CoC is then renewed two more times, each additional CoC renewal term being for a 40-year period. In this case, the general license would run through both renewal periods. Thus, the general license for that cask would commence upon loading and terminate at the expiration of the CoC (giving a storage period of 81 years).

Scenario 5: The initial CoC has a term of 20 years. The CoC is then renewed for 40 years. The CoC is then renewed a second and final time, but only for a 30 year period. The

general licensee places a cask into service at the end of the 29<sup>th</sup> year of the final renewal term. In this scenario, the general license for that cask would be for a storage period not to exceed the term certified by the cask's CoC (for a renewed CoC, that is the period of time commencing with the most recent CoC renewal date and ending with the CoC expiration date). Thus, in this scenario, the general license for this cask would commence upon loading and terminate 30 years after loading (in this case, 29 years after expiration of the CoC, giving a storage period of 30 years).

In short, the general license term for any given cask will be, at a minimum, for a storage period not to exceed "the term certified by the cask's CoC" (as that term is defined in § 72.3). The rationale for extending the general license through any CoC renewal term is two-fold. First, the extension of the general license through a CoC renewal term is premised upon the licensee implementing all appropriate aging management requirements. Second, the NRC concluded that the occupational risks of taking a cask out of service and repackaging the spent fuel into another storage cask exceed the risks of leaving the spent fuel in the original cask.

*J. Are there possible conflicts that could arise for storage cask designs that are granted a term extension that are also approved for a different term limit as a transportation package?*

The Commission raised this issue in its SRM for SECY-06-0152, dated August 14, 2006. The NRC staff does not foresee any possible conflicts. The current regulations in Part 72 encourage, but do not require, storage cask designs to have a compatible, approved transportation cask. So called "dual use" systems must be separately certified under the requirements in 10 CFR Part 71 (transportation) and Part 72 (storage). Typically, the only common item between these systems is the inner canister, which holds the spent fuel contents.

Part 71 certificates for transportation packages are issued for a 5-year term whereas Part 72 CoCs are issued for much longer periods (under the current regulations, all approved CoCs have 20-year terms; under this final rule, the CoC term is extended to a not to exceed 40-year term). For each transportation cask certified under 10 CFR Part 71, the CoC specifies “approved contents.” The description of the approved contents for a spent fuel transportation package defines the acceptable fuel types and characteristics and, typically, it is the condition of the fuel, not its age, that determines its acceptability. Spent fuel stored in casks, even for extended terms, is not expected to experience any significant degradation that would affect its acceptability to be shipped in a suitable transportation cask. The Part 72 general design criteria require fuel retrievability (§ 72.122(l)) and for CoC applications, the design of the storage cask should consider, to the extent practicable, compatibility with removal of the stored spent fuel from a reactor site, transportation, and ultimate disposition by the Department of Energy (§ 72.236(m)). Based upon the NRC-supported INL research program and the Surry and H. B. Robinson ISFSI renewal applications, the NRC staff has concluded that typical spent fuel can be safely stored in casks without appreciable degradation.

If the condition of spent fuel, or its storage canister, was believed to have degraded during extended storage such that it no longer met the criteria for approved contents, a licensee would have other alternatives for transport of that spent fuel. A new or modified approved transportation cask might be used, or the fuel might be repackaged, to place it in an acceptable configuration.

*K. How does the NRC track cask expiration dates?*

Section 72.212(b)(2) of the final rule will require general licensees to register use of each cask with the Commission no later than 30 days after using that cask to store spent fuel. To register casks, licensees must submit their name and address, reactor license and docket

numbers, the name and title of a person responsible for providing additional information concerning spent fuel storage under the general license, the cask certificate number, the amendment number, if applicable, cask model number, and the cask identification number. With this information, the Commission will know the loading and expiration dates of each cask. This information will also enable the NRC to schedule any necessary inspections and will permit the NRC to maintain an independent record of use for each cask.

*L. Who is responsible for applying for CoC renewals?*

The final rule retains the structure of the current rule, which emphasizes that the certificate holder (the cask vendor) applies for cask renewal. If the certificate holder chooses not to apply for the renewal of a particular cask design or is no longer in business, a licensee, a licensee's representative, or another certificate holder may apply for renewal in its place. If the applicant for CoC renewal seeks to fabricate this cask design, it must satisfy the applicable requirements of Part 72, including establishment and maintenance of the requisite quality assurance (QA) program (general licensees may rely upon previously established Part 50 or 71 QA programs if they meet the requirements of §§ 72.140 and 72.174).

*M. Does the NRC have a definition for "terms, conditions, and specifications" as they relate to the CoC?*

The NRC does not include a definition for "terms, conditions, and specifications" in the final rule because these words are generic in nature, and are used in other parts of the NRC's regulations without definition.

N. Can a licensee apply CoC amendments to previously loaded casks?

This final rule amends § 72.212(b) to clarify that general licensees may apply changes authorized by a CoC amendment to a previously loaded cask provided that the licensee demonstrates, through a written evaluation, that the cask meets the terms and conditions of the subject CoC amendment (i.e., the loaded cask must conform to the CoC amendment codified by the NRC in § 72.214).

*O. May a general licensee implement only some of the authorized changes in a CoC amendment without prior NRC approval?*

If a general licensee elects to apply the changes authorized by a CoC amendment to a previously loaded cask, then the cask, after the changes have been applied, must conform to the terms and conditions (including the technical specifications) of the CoC amendment. Partial or selective application of some of the authorized changes, but not others, requires prior NRC approval (in this case, the general licensee would apply for an exemption). The basis for allowing licensees to apply the changes authorized by a CoC amendment to a previously loaded cask without prior approval from the NRC is that the cask will remain in an analyzed condition if, after the changes have been applied, it conforms to the terms and conditions of the CoC amendment. The NRC has previously stated, “a spent fuel storage cask will be relied on to provide safe confinement of radioactive material independent of a nuclear power reactor’s site, so long as conditions of the Certificate of Compliance are met” (54 FR 19381; May 5, 1989). However, partial or selective application of a CoC amendment’s changes could result in a cask that would be in an unanalyzed condition.

In a related issue, the NRC agrees with an industry comment raised in response to the publication of the draft preliminary rule text (73 FR 45173; August 4, 2008). The draft

preliminary rule text required that a general licensee ensure that once the changes authorized by a CoC amendment had been applied to a previously loaded cask, that the cask then “fully conforms” to the terms and conditions of the CoC amendment. The industry comment raised the concern that the phrase “fully conforms” was overly restrictive and requiring conformance with all the changes authorized by a CoC amendment would not be feasible or logical in certain instances, namely, in those cases where the amended CoC requirements do not apply to that particular general licensee site or ISFSI (e.g., requirements for pressurized water reactors (PWR) fuel at a boiling water reactor (BWR) plant).

In light of this comment, the final rule language now requires that the cask, once CoC amendment changes have been applied, “conforms” to the terms and conditions of the CoC amendment. Thus, CoC amendment requirements for PWR fuel need not be met at a BWR plant.

Similarly, if the CoC amendment includes changes to the Technical Specifications for loading, general licensees may have difficulty demonstrating that the previously loaded cask complies with the new loading requirements. As revised by this final rule, § 72.212(b)(5) will require general licensees to perform written evaluations prior to applying the changes authorized by an amended CoC to a previously loaded cask. If the evaluation indicates that the loading conditions under the initial or older CoC amendment would not affect the ability of the previously loaded cask to meet the storage or unloading requirements of the newer CoC amendment, then the cask would be considered as conforming with the terms and conditions of the newer CoC amendment without having to meet the new loading requirements.

*P. Do later CoC amendments encompass earlier CoC amendments?*

No, later CoC amendments do not encompass earlier amendments unless the language of the later CoC amendment expressly indicates otherwise. Generally, when the NRC reviews

an amendment to a CoC, the NRC staff considers the changes associated with the amendment request only and limits its review to the bounding conditions of the analysis. Specific changes associated with earlier CoC amendments for previously loaded casks are not considered during the review process for a later amendment. Thus, depending on the nature of the changes, later amendments do not necessarily encompass earlier amendments and sometimes may be inconsistent with earlier amendments.

*Q. Why can't general licensees use the § 72.48 process to apply CoC amendment changes to previously loaded casks?*

The principal requirement of § 72.48 regarding changes to cask designs is that the desired changes do not result in a change in the terms, conditions, or specifications incorporated in the CoC. A previously loaded cask is bound by the terms, conditions, and technical specifications of the CoC applicable to that cask at the time the licensee loaded the cask. Thus, under § 72.48, a licensee may only make those cask design changes that do not result in a change to the terms, conditions, or specifications of the CoC under which the cask was loaded. The final rule will not amend § 72.48, but will amend § 72.212 by authorizing a general licensee to apply the changes authorized by a CoC amendment to a previously loaded cask, provided that after the changes have been applied, the cask conforms to the terms and conditions, including the technical specifications, of the CoC amendment.

*R. If a general licensee selects and purchases a cask fabricated under an earlier CoC amendment, but does not load the cask, can the general licensee adopt the most recent CoC amendment for the empty cask before loading it?*

Adoption of the most recent CoC amendment depends on the nature of the changes between the CoC amendment under which the cask system was fabricated and the most recent amendment. CoC amendments are routinely requested by cask manufacturers or vendors (also referred to as the certificate holders) to account for advances in cask design and technology. Some amendments will be associated with cask hardware changes. A cask system that was purchased under an older amendment may or may not be able to be modified to a cask system that meets the most recent amendment.

As revised by this final rule, § 72.212(b)(5) will require that general licensees perform written evaluations demonstrating that the cask, once loaded with spent fuel, will conform to the terms, conditions and specifications of a CoC or an amended CoC listed in § 72.214. In the case of an unloaded cask fabricated under the initial or earlier CoC amendment, the cask cannot be loaded under a later CoC amendment if the § 72.212(b)(5) evaluation shows that the cask, once loaded, will fail to meet the terms, conditions and specifications of the later CoC amendment. If the evaluation demonstrates that the terms, conditions and specifications of the later CoC amendment are met, then the cask can be loaded under the later CoC amendment.

*S. What are the NRC's plans for providing guidance and examples of aging analyses and AMPs to licensees?*

The NRC has developed NUREG-1927 "Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance." This SRP provides guidance to the NRC staff in reviewing licensees' programs for managing the effects of aging on spent fuel storage casks or ISFSI sites. Aging analyses and AMPs are two components of an overall program for managing the effects of aging. Because applicants will need to submit a TLAA and a description of their

program to manage the effects of aging when applying for renewal of either CoCs or specific licenses under the final rule, this SRP will also assist potential applicants in identifying parameters to be included in a renewal application and measures necessary to ensure that the cask or ISFSI can be operated during the renewal period without undue risk to the public health and safety. The SRP will be published following the publication of this final rule.

*T. Could the NRC maintain the current paragraph designations of § 72.212(b)?*

The NRC understands the burden arising from changing the paragraph designations of a regulation. However, the NRC is rearranging the provisions of § 72.212(b) to better organize regulatory requirements. For example, the final rule will group recordkeeping requirements at the end of § 72.212(b) rather than dispersing them among other requirements, as is currently the case. The NRC's intent for rearranging § 72.212(b) is to make this provision more user-friendly. These changes are documented in Table 1 located in Section IV (Item 4) of this document (Discussion of Final Amendments by Section under the discussion pertaining to § 72.212).

*U. When are licensees required to submit cask registration letters?*

Under final § 72.212(b)(2), general licensees must submit a cask registration letter no later than 30 days after using that cask to store spent fuel. One registration letter may be submitted for a campaign that loads more than one cask, provided that the letter lists the cask certificate number, the amendment number, the cask model number, and the cask identification number of each cask covered by the campaign.

In addition, under final § 72.212(b)(4), general licensees must submit a cask registration letter no later than 30 days after applying the changes authorized by an amended CoC to a

previously loaded cask. One registration letter may be submitted for a campaign that applies CoC amendment changes to more than one cask, provided that the letter lists the cask certificate number, the amendment number to which the cask will conform, the cask model number, and the cask identification number of each cask covered by the campaign.

*V. If a CoC is not renewed, how long would general licensees have to remove casks of that design from service?*

For those cask storage systems for which renewals are not planned, general licensees should plan ahead to remove these cask storage systems from service at or before the termination of the general license (see the response to Question “I” above). Because users are most aware of the general cask schedule and the number of casks to be removed from service at their sites, users are in the best position to develop a reasonable schedule for the removal.

*W. When the NRC renews a CoC, are all amendments to that CoC simultaneously renewed as well?*

Section 72.214 lists one expiration date for each CoC. Amendments under a CoC may have different effective dates; however, they share the same certificate number and docket number. Therefore, when the NRC renews a CoC, all amendments to that CoC are renewed as well.

*X. If a general licensee applies for the renewal of a given CoC (assuming the certificate holder went out of business or chose not to apply for the renewal of a given CoC), and if the NRC approves the renewal of that CoC, is the renewed CoC available only to that general licensee or is it available to all general licensees?*

CoCs are generic designs and approved by rulemaking. The renewed CoC will be available to all persons who hold a general license under § 72.210.

*Y. Can the requirements regarding TLAAAs for CoC renewals be based upon a “current licensing basis” (CLB) patterned after 10 CFR Part 54?*

The NRC does not believe that the Part 54 CLB is the appropriate basis for TLAAAs in support of CoC renewals. The NRC does not believe that it is appropriate for the CLB to be applied to cask CoC renewals, which are generic. The CLB is typically the set of NRC requirements applicable to a specific plant and a specific licensee’s written commitments for ensuring compliance with and operation within applicable NRC requirements, including the plant specific design basis (including all modifications and additions to regulatory commitments over the life of the license) that are docketed and in effect.

*Z. What is the status of the draft NRC Regulatory Issue Summary (RIS) 2007-26 which was issued on January 14, 2008 (73 FR 2281)?*

The NRC decided not to finalize the draft RIS 2007-26 because § 72.212(b) provides a path forward for implementation of later CoC amendments to previously loaded casks. An Enforcement Guidance Memorandum (EGM), dated September 15, 2009, was issued in conjunction with the publication of the proposed rule to provide guidance to NRC inspectors for exercising enforcement discretion concerning deficiencies related to implementing changes, authorized by CoC amendments to previously loaded casks, that occurred prior to issuance of the EGM.

### **III. Summary and Analysis of Public Comments on the Proposed Rule**

This section presents a summary of the public comments received on the proposed rule and supporting documents, the NRC's response to the comments, and changes made in the final rule and supporting documents as a result of these comments.

The NRC received five comment letters on the proposed rule. These comments came from the Nuclear Energy Institute, the U.S. Department of Energy, Exelon Nuclear, Decommissioning Plant Coalition, and the Prairie Island Indian Community. Three of the commenters supported the new regulation, while two of the commenters expressed concern about the proposed regulation. The commenters opposed to the proposed regulation were primarily concerned about the increased license term extension from 20 to 40 years for specific ISFSI licensees. One of these commenters also had questions about the environmental review process. The other commenters provided comments on different topics within the proposed rule, including the proposed CoC terms, the CoC renewal process, the CoC amendment process, TLAAs, and spent fuel storage in general. These commenters made observations about these topics and recommended areas within the proposed rule where the NRC could make improvements. Two commenters suggested revisions to the proposed rule language and the SOC.

Copies of the public comments are available for review in the NRC Public Document Room, 11555 Rockville Pike, Rockville, MD 20852-2738. A review of the comments and the NRC responses follow:

## **GENERAL SUPPORT**

### **Comment 1:**

A commenter agreed with the proposed amendments and stated that they are in the public interest and are consistent with scientific evidence. The commenter also noted that the proposed regulation would reduce the costs incurred by licensees and the NRC as a result of preparing and reviewing applications and exemption requests. The commenter stated that the proposed rule would provide the NRC and regulated entities with greater regulatory certainty.

### **Response:**

The NRC agrees with the comment.

## **GENERAL OPPOSITION**

### **Comment 2:**

A commenter suggested that the proposed revisions would negatively and directly impact their community and expressed opposition to extending specific ISFSI licenses by 40 years. The commenter also indicated that the proposed rule, along with the “scrapping” of Yucca Mountain, would lead to permanent spent fuel storage at nuclear power reactor sites. In addition, the commenter urged that the 20-year initial and renewal terms should remain unchanged. The commenter suggested that a 20-year term better protects the public because the casks are monitored more frequently.

**Response:**

The NRC acknowledges the concerns raised by the commenter. The Commission believes there is reasonable assurance that spent fuel can be stored safely and without significant environmental impacts at ISFSIs during the extended license terms authorized by the final rule. This reasonable assurance is partly based on the technical data gained from an NRC supported research program and field data. Details are discussed in the response to Question “C” of the “Discussion” section of this document. Furthermore, this final rule would require all licensees to identify time-dependent degradations of the ISFSI SSCs when they apply for license renewal. If any aging issues which could adversely affect SSCs are identified, the final rule requires the license renewal applicant to describe an AMP in its license renewal application. The AMP will address the prevention and mitigation of aging effects. The NRC staff will evaluate the AMP and will only approve the renewal application if the AMP is deemed adequate.

An AMP would require licensees to monitor the casks and take other measures to ensure public health and safety. AMP requirements will be reflected in the terms and conditions of the renewed specific license, which are enforceable by NRC. The NRC will monitor the licensee’s compliance with the terms and conditions of the license through the NRC’s inspection program. The NRC concluded that, with appropriate aging management and maintenance programs, a license term up to 40 years is reasonable and provides adequate protection of public health and safety.

**Comment 3:**

A commenter stated that the proposed rule, “like the proposed revision of the Waste Confidence Rule,” validated the commenter’s earlier concerns raised during the initial licensing process for the ISFSI located near its tribal boundary and “exposes the false assurances that the ISFSI is an interim or temporary solution.” The commenter added that the Commission’s

position is to “simply streamline approvals for extending the term that spent fuel can be stored at either onsite or offsite ISFSIs.” The commenter suggested that “regulatory requirements should be further enhanced rather than relaxed.”

**Response:**

The NRC has not made any regulatory or policy decision which states that the storage of spent fuel at ISFSIs obviates the need for a permanent repository of spent fuel and other high-level waste. The establishment of such a repository is a national policy decision and is beyond the scope of this rulemaking.

The extension of specific license terms in § 72.42 does not relax any regulatory requirements. The rationale for extending the terms for specific ISFSI licenses, for both initial terms and renewals, is set forth in the responses to Questions “C”, “D”, and “F-H”, in Section II of this document. The rule requires that any applicant for license renewal demonstrate the safety of the continued storage of spent fuel for the requested term through TLAAAs and the establishment of an AMP. If the applicant demonstrates to the NRC appropriate aging management and maintenance programs, then the NRC has concluded that a renewal term up to 40 years is reasonable and provides adequate protection of public health and safety.

**COC TERMS AND RENEWAL PROCESS**

**Comment 4:**

A commenter stated that the term “unloaded cask” in the fifth paragraph of Section II, “Discussion,” Question “E”, of the proposed rule is unclear. The commenter asked whether the term “unloaded cask” is limited to a cask that has never been loaded or if it also includes a cask that has been used but subsequently unloaded of stored fuel. The commenter added that the

review of a generic CoC renewal should not depend on whether or not a particular cask is unloaded. The commenter requested that the NRC delete the final sentence of the fifth paragraph of Section II, "Discussion," Question "E."

**Response:**

In the context of the response to Question "E", the NRC considered the term "unloaded cask" to be either a cask that has never been loaded or one that was loaded and then subsequently unloaded. In any event, the NRC agrees with the comment. When a CoC is renewed by the NRC, it is the cask design that is being renewed. It does not matter whether the cask is loaded or not. Therefore, clarifying changes have been made to the response to Question "E", including the deletion of the sentence which contains the term "unloaded cask."

**Comment 5:**

Two commenters requested that NRC clarify Section II, "Discussion," Questions "I" and "V" and Section III, "Discussion of Proposed Amendments by Section," Item 4 and § 72.212(a)(3) of the proposed rule. These sections of the SOC and § 72.212(a)(3) address the relationship between the term of a general license, the CoC term and renewal, and the date an individual cask is loaded.

One of the commenters stated that "[i]ndustry believes that each individual cask should be permitted to be operated for the full design life of the cask, including the full renewal period." The commenter stated that aging management requirements would be implemented during the renewal period. This commenter then provided two examples: the first, "a cask loaded under an active CoC with a 20-year initial term and not renewed should be permitted to be operated under a general license for 20 years from the date of initial use, no matter when that cask is placed into service;" and the second, "a cask loaded under an active CoC with a 20-year initial

term and renewed for 40 years should be permitted to be operated under a general license for 60 years from the date of initial use, no matter when that cask is placed into service.”

The commenter then asserted that each cask is fabricated to meet a specific design life and that the “successful renewal of the CoC extends that design life provided all design and maintenance parameters that were part of the renewal approval are met.” The commenter further asserts that the design life “does not begin for each individual cask until the cask is loaded, i.e., the cask is experiencing the conditions contemplated in design.” The commenter concluded that “forcing casks to be taken out of service at an arbitrary date would result in unnecessary fuel repackaging and occupational radiation exposition with no commensurate public health and safety benefit.”

The second commenter made a similar comment, stating that the “cask life should be solely based on the qualification of the cask, and not on the CoC expiration date.” The commenter then suggested that “the NRC consider evaluating the lifespan of the fuel storage system based on date of loading (i.e., activation of the system) of the cask system in compliance with all applicable terms, conditions, and specification, and not based on other external factors.”

**Response:**

The NRC agrees, in part, and disagrees, in part, with the comments. The Part 72 regulations do not define the term “design life.” Rather, the Part 72 regulatory scheme is based on licenses, specific and general, and the terms of those licenses. The general license term is premised upon the CoC in effect at the time the cask was placed into service (i.e., loaded with spent fuel and deployed onto the ISFSI pad). As explained in the response to Question “1” of Section II, the general license term, for loaded casks, will run through any consecutive CoC

renewal terms as the occupational risk of unloading a cask and repackaging the spent fuel into another storage cask exceeds the risk of keeping the spent fuel in the original cask.

The NRC agrees with the first commenter's statement regarding the implementation of aging management requirements during the renewal period. The NRC further agrees with the first commenter's first example regarding a cask fabricated under a 20-year CoC term, which is not renewed. Under both the current regulation and the regulation as revised by this final rule, the general license term for such a cask would be 20 years, regardless of when during the 20-year CoC term the cask is placed into service. Of course, after the CoC expires, casks of that design could no longer be placed into service.

The NRC disagrees with the second example and the commenter's rationale to support that example. The commenter states "a cask loaded under an active CoC with a 20-year initial term and renewed for 40 years should be permitted to be operated under a general license for 60 years from the date of initial use, *no matter when that cask is placed into service*" (emphasis added). The NRC does not agree that successful renewals of the CoC cumulatively extend the general license term for that cask (the commenter uses the term "design life," which the NRC assumes to be the equivalent of the general license term desired by the commenter). The commenter uses the example of a CoC that has an initial term of 20 years followed by a renewal term of 40 years. The commenter then asserts that the design life of the cask would be 60 years. Thus, under this reasoning, a cask placed into service the day before the renewed CoC expires could be in service for 60 years. Essentially, the commenter appears to be asserting that the regulatory scheme should allow cumulative terms, such that each successive renewal of the CoC adds to the design life of the cask, and thus, to the term of the general license.

The intent of the amendments implemented by the final rule is that the use of a cask is determined by the general license term, which in turn is determined by the term specified in the applicable CoC in effect at the time the cask is placed into service; the general license term is

not determined by adding all the successive CoC renewal terms to the initial CoC term. The term of the general license for any cask placed into service during a CoC renewal term is based upon the length of the renewal term (renewal date to expiration). Thus, if a CoC is renewed for 40 years and a cask fabricated under that CoC is placed into service during the 39<sup>th</sup> year of the renewal term, the general license for that cask would be 40 years.

According to the commenter, if the initial term of the CoC was 20 years, and the CoC was then renewed twice, each time for 40 years, then a cask placed into service on the last day of the second renewal period would have a general license of 100 years (essentially, 100 years beyond the CoC expiration date). It is not the intent of the NRC to allow for such extended, cumulative license terms.<sup>1</sup> Such an interpretation of the regulatory scheme implemented by this final rule is well beyond the regulatory norm and is not aligned with the stated purpose of this rulemaking, which was to extend specific license terms from not to exceed 20 years to not to exceed 40 years and then to make the terms of CoCs and general licenses equal with those of specific licenses.

The NRC disagrees with the second commenter, who stated that “cask life should be solely based on the qualification of the cask, and not on the CoC expiration date.” In this regard, the NRC will allow for casks already in service, i.e., those already loaded prior to any given CoC renewal, to remain in service through any future renewal periods, given that the occupational hazards associated with unloading a cask and repackaging the spent fuel into another storage cask exceed the risks of leaving that fuel in the original cask. However, this is not the same as allowing an unloaded cask (i.e., either a new cask or one formerly loaded and then subsequently unloaded) to be placed into service for a cumulative term that is equal to the

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<sup>1</sup> As background, see the response to Question 21 in the July 18, 1990 (55 FR 29186), final rule that promulgated Subparts K and L of Part 72. In particular, the NRC stated that “the 20-year storage period will also apply to new casks put into use after a Certificate of Compliance is reapproved.” Clearly, there was no intent that the storage period for a cask placed into service during the renewal term was to be for a term that was equal to the initial term plus the renewal term.

length of the initial term and all renewal terms. The intent of this final rule is that the general license term for any cask placed into service shall not be longer than the term certified by the then effective CoC, unless that CoC is renewed after that cask has been placed into service, in which case, the general license will terminate at the expiration of the CoC (i.e., at the end of the final CoC renewal term). Please see the response to Question “I” of this document for additional details, including examples of various general license scenarios.

In response to these comments, this final rule amends § 72.212(a)(3) to include clarifying language regarding general license terms and similarly, adds a definition of the phrase “the term certified by the cask’s Certificate of Compliance” to the Part 72 definitions section, § 72.3.

**Comment 6:**

A commenter requested that the NRC clarify the QA program requirements for general licensees that seek to fabricate casks (as discussed in Section II, “Discussion,” Question “L” of the proposed rule). The commenter asked whether a general licensee that seeks to fabricate a cask under its Part 50 QA program may apply its Part 50 QA program as long as it governs Part 72 activities.

**Response:**

Section 72.140 sets forth the requirements of a Part 72 QA program. Under § 72.140(d), a QA program previously approved by the Commission as satisfying the requirements of Appendix B to Part 50 or Subpart H of Part 71 will be accepted as satisfying the requirements of § 72.140(b), provided that the general licensee or other applicant meets the recordkeeping requirements of § 72.174. In filing the description of the QA program required by § 72.140(c), a general licensee who seeks to fabricate casks under a renewed CoC must notify the NRC, in

accordance with § 72.4, of its intent to apply its previously-approved QA program to Part 72 activities. The notification shall identify the previously-approved QA program by date of submittal to the Commission, docket number, and date of Commission approval.

**Comment 7:**

A commenter suggested that the word “terms” in the phrase “terms, conditions, and specifications” may be confused with the word “term” as in the “term certified in the cask CoC.” The commenter requested that the NRC revise Section III, “Discussion of Proposed Amendments by Section,” Item 4 to address this issue. The commenter requested that the NRC add a definition to § 72.3 for the phrase “term certified by the cask’s Certificate of Compliance.”

**Response:**

The NRC agrees that clarification is needed. The NRC added the following definition to § 72.3:

*“Term certified by the cask’s Certificate of Compliance, for the purposes of this part, means, for an initial CoC, the period of time commencing with the CoC effective date and ending with the CoC expiration date, and for a renewed CoC, the period of time commencing with the most recent CoC renewal date and ending with the CoC expiration date.”*

**Comment 8:**

One commenter asked if a “cask user or user’s representative” renews a CoC, then would that user or user’s representative become the CoC holder and, as a result, obtain all CoC holder responsibilities. In particular, the commenter questioned whether the user or user’s

representative would assume responsibility for cask Final Safety Analysis Report (FSAR) updating and reporting requirements under § 72.48.

**Response:**

In the SOC for the July 18, 1990, final rule which promulgated Subparts K and L of Part 72, the NRC stated its expectation that the cask vendor, if still in business and fabricating the subject cask design, would apply for cask renewal (55 FR 29184; July 18, 1990). If the certificate holder is no longer in business or chooses not to apply for the renewal of a particular cask design, then a cask user or user's representative (i.e., the licensee or licensee's representative) could apply to renew a CoC. If approved by the NRC, the cask user or representative would then become the CoC holder. In this capacity, the cask user or representative absorbs all CoC holder responsibilities, such as cask FSAR updating and reporting requirements under § 72.48.

**COC AMENDMENT PROCESS**

**Comment 9:**

A commenter objected to a sentence in the first paragraph of Section II, "Discussion," Question "O" that stated, "However, partial or selective application of a CoC amendment's changes would result in a cask that would be in an unanalyzed condition." The commenter asserted that this sentence was a "significant overstatement" as not all partial or selective application of a CoC amendment's changes would result in the cask being in an unanalyzed condition. The commenter requested that the sentence be deleted or that the first instance of "would" be replaced with the word "could."

**Response:**

The NRC agrees with the comment that, depending on the nature of changes in the amendment, partial or selective application of a CoC amendment's changes may not always result in the cask being in an unanalyzed condition. To minimize the possibility of the cask being in an unanalyzed condition, however, the general licensee is required to apply for an exemption in those cases where the general licensee seeks such a partial or selective application of the changes authorized by a later CoC amendment to a previously loaded cask. The NRC has revised the sentence in Section II, "Discussion," Question "O" of this document as follows:

"However, partial or selective application of a CoC amendment's changes could result in a cask that would be in an unanalyzed condition."

**Comment 10:**

A commenter suggested that the NRC should consider including in CoC amendments language addressing whether or not the CoC amendment encompasses all requirements of the initial CoC and previous amendments. The commenter asserted that such CoC amendment language would "significantly simplify" the adoption process for general licensees, "especially in cases where only the contents have changed and no cask hardware modifications are involved."

**Response:**

The approach suggested by the commenter is not within the scope of this rulemaking because the commenter's recommended language would be placed within the text of the CoC amendment, not the NRC regulations. Moreover, the NRC has considered a process that requires the application of every Part 72 CoC amendment to include a basis which proposes the applicability of the proposed amendment to previously loaded casks. The NRC staff's

acceptance of the proposed applicability and its basis would then be documented in the CoC amendment and in the accompanying Safety Evaluation Report (SER). However, the NRC staff has concluded that conducting the requisite analyses to evaluate each prior CoC amendment in relation to the new amendment would impose more burdens on both the NRC and applicants as compared to the process in the final rule.

**Comment 11:**

With respect to Section II, “Discussion,” Question “W” of the proposed rule, a commenter asked whether, after the renewal of a CoC, subsequent amendments to that CoC continue the existing amendment numbering or if the numbering for these amendments “start over” as the first amendment against the renewed CoC.

**Response:**

After a CoC is renewed, subsequent amendments to that CoC will continue with the existing numbering. For example, if there are seven amendments under a CoC before renewal, the next amendment, under the same CoC after renewal, will be Amendment No. 8.

**Comment 12:**

A commenter provided comments as requested under Section II, “Discussion,” Question “AA” of the proposed rule. Question “AA” is not included in the SOC of this final rule because it was intended only to solicit comments on the particular items identified. Question “AA” solicited public comment on whether or not the evaluation required by proposed § 72.212(b)(5) should be reviewed and approved by the NRC. The commenter does not support NRC review of “evaluations performed pursuant to § 72.212(b)(5) to apply a later CoC amendment to previously loaded casks.” The commenter suggested that NRC review of these evaluations

would be “inappropriate and contrary to the concept of a general licensee.” The commenter stated that the NRC approves CoC amendments and that § 72.212 evaluations, and revisions to these evaluations, “are reviewed by NRC under the inspection program, at NRC’s discretion.”

**Response:**

The NRC agrees with the comment. The amendments implemented by this final rule do not require any prior NRC review or approval of the evaluations conducted by a general licensee pursuant to § 72.212(b)(5). After a general licensee has made the findings required by § 72.212(b)(5)(i)-(iii), it may apply the changes authorized by a later CoC amendment to a previously loaded cask. Of course, the NRC may review these evaluations through the NRC inspection program.

**Comment 13:**

A commenter described the proposed language in § 72.212(b)(7) that states, “and revise it to add a requirement to evaluate any changes to the site parameters determination and analyses required by § 72.212(b)(6),” as unnecessary and requested that the language of § 72.212(b)(7) be simplified. The commenter recommended that the NRC revise § 72.212(b)(7) from “paragraph (b)(5) of this section” to “paragraphs (b)(5) and (b)(6) of this section.”

**Response:**

The NRC agrees with the comment that § 72.212(b)(7) could be clarified by modifying the first sentence. Therefore, the NRC revised the first sentence of § 72.212(b)(7) as follows:

“Evaluate any changes to the written evaluations required by paragraphs (b)(5) and (b)(6) of this section using the requirements of § 72.48(c).”

**Comment 14:**

A commenter stated that the proposed 30-day timeframes for licensees to notify the NRC of the initial use of a cask and the application of a later CoC amendment to a previously loaded cask will cause the licensee an “unnecessary administrative burden.” Specifically, the commenter argued that the proposed rule language would require licensees to send two separate notifications into the NRC: (1) for new casks, licensees would need to notify the NRC within 30 days of deployment; and (2) for previously loaded casks, licensees would need to notify the NRC within 30 days of applying the changes authorized by a CoC amendment to a previously loaded cask. The commenter noted that applying the changes authorized by a CoC amendment to previously loaded casks is usually part of a larger campaign that includes deploying new casks. The commenter stated that allowing “120 days for both notifications would allow general licensees to combine these two notifications into one, in most cases.”

**Response:**

The NRC does not agree that the requirement to prepare two letters, one covering loading the new casks, and the second covering the application of the changes authorized by a later CoC amendment to previously loaded casks, is particularly burdensome. The NRC staff has concluded that the 30-day timeframe is a reasonable requirement.

The NRC acknowledges that applying the changes authorized by a later CoC amendment to previously loaded casks may be connected to a cask loading campaign. If the general licensee is loading new casks fabricated under a given CoC amendment and the changes authorized by that CoC amendment are also applied to previously loaded casks at the same time as explained by the commenter, one registration letter may be sufficient for that whole campaign, provided that the letter lists the cask certificate number, the appropriate CoC

amendment number, the cask model number, and the cask identification number of each cask, both new and previously loaded.

The commenter states that the § 72.212(b)(5) report, which would cover both the loading of the new casks and the implementation of the changes to the previously loaded casks, would be prepared well in advance of the loading campaign. Sections 72.212(b)(2) and (4), however, require the registration of the use of new casks and the application of changes authorized by a later CoC amendment to previously loaded casks, no later than 30 days after the action—not 30 days after the completion of the § 72.212(b)(5) report. Thus, even if the § 72.212(b)(5) evaluation report was completed well in advance of the campaign, the general licensee could time its actions such that changes to the previously loaded casks would be implemented at or near the same time that the new casks are deployed; and as such, have both parts of the campaign covered in one letter. In the event that the general licensee cannot time the loading of the new casks with the implementation of the changes authorized by the latter CoC amendment so as to have both actions covered by one 30-day letter, the licensee will be required to prepare two letters.

**Comment 15:**

A commenter requested that the NRC remove the word “all” from the first sentence of § 72.212(b)(4) to be consistent with the discussion provided in Section II, Question “O” of the proposed rule.

**Response:**

The NRC agrees with the comment that, in order to be consistent, the word “all” should be removed in the first sentence of § 72.212(b)(4). The NRC revised § 72.212(b)(4) accordingly.

**Comment 16:**

A commenter stated that § 72.212(b)(4) is unclear with regard to when the 30-day “clock” starts for licensees to notify the NRC. The commenter added that § 72.212(b)(4) is inconsistent with the wording used in § 72.212(b)(2). The commenter suggested the following language to replace the first sentence in § 72.212(b)(4): “Register each cask with the Nuclear Regulatory Commission no later than 30 days after applying the changes authorized by an amended CoC to a cask loaded under the initial or an earlier amended CoC.”

**Response:**

The NRC disagrees with the comment. The 30-day clock starts after the application of changes authorized by the CoC amendment to the previously loaded cask (a cask loaded under the initial CoC or an earlier CoC amendment). The language suggested by the commenter is not sufficient because there is no direct nexus between the phrase “each cask” with the phrase “the changes authorized by an amended CoC to a cask loaded under the initial or an earlier amended CoC.” The NRC concludes that the regulatory language of § 72.212(b)(4) is clear and will not be revised other than the deletion of the word “all” from the first sentence (as described in the response to Comment No. 15).

**Comment 17:**

A commenter stated that the proposed wording of § 72.212(b)(7) is unnecessarily complex and recommended the following language: “Changes to the written evaluations required by § 72.212(b)(5) of this section shall be reviewed in accordance with § 72.48(c), as applicable.” As an alternative, the commenter recommended that the NRC change the first word of this section of the proposed rule from “evaluate” to “review.” The commenter suggested

this revision because some general licensees could interpret the word “evaluate” as requiring a full § 72.48 evaluation, regardless of the nature of the change to the document.

**Response:**

The NRC disagrees with the comment. In response to Comment 13 the NRC revised § 72.212(b)(7) to read as follows:

“Evaluate any changes to the written evaluations required by paragraphs (b)(5) and (b)(6) of this section using the requirements of § 72.48(c).”

Both the language of the proposed rule and the above revised language follow the same logic and pattern as the regulatory language in effect before this final rule’s effective date (§ 72.212(b)(2)(ii) (2009)). The intent of this amendment was only to renumber the provision from § 72.212(b)(2)(ii) to § 72.212(b)(7) and make related clarifying changes (such as the reference to § 72.212(b)(6)). It is not the NRC’s intent to change the substantive meaning of this provision, and as such, the NRC does not agree with changing the word “evaluate” to “review.”

**Comment 18:**

A commenter stated that the addition of the phrase “and, for those casks to which the licensee has applied the changes of an amended CoC, the amended CoC” to § 72.212(b)(11) is unnecessary. The commenter suggested the following language instead: “Maintain a copy of the CoC and each amended CoC(s) applicable to casks loaded and deployed at the ISFSI, and the documents referenced in such Certificates for each cask model used for the storage of spent fuel until use of the cask model is discontinued.”

**Response:**

The NRC disagrees with the comment because CoC amendments may have a different design basis from the initial CoC as well as each other. Consequently, it is necessary for general licensees to maintain the initial CoC (along with documents referenced in the initial CoC) for those casks operating under the terms and conditions of the initial CoC and for those casks operating under the terms and conditions of a given CoC amendment, to maintain that CoC amendment (along with documents referenced in the amended CoC).

**Comment 19:**

A commenter stated that the rule applies to facilities that have one or more operating reactors. The commenter expressed concern that the proposed regulation would create unneeded burdens for permanently shut-down reactor sites. The commenter suggested that the NRC modify the proposed language in § 72.212(b) to address this issue, but did not provide alternative language. Specifically, the commenter raised concerns about the application of changes authorized by a later CoC amendment to a cask loaded under the initial CoC amendment or an earlier CoC amendment thereto (a “previously loaded cask”).

**Response:**

Part 72 does not draw a distinction between an operating facility and a decommissioned facility. The Part 72 regulations make a distinction between specific licenses and general licenses. Under § 72.210, a holder of a Part 50 or 52 power reactor license holds a Part 72 general license. Section 72.212 sets forth the conditions of a general license. If a decommissioned facility does not have an active Part 50 or 52 license, it would then not have a Part 72 general license; most likely, the facility would be operating under a specific Part 72 license. The application of changes authorized by a CoC amendment to a previously loaded

cask is not applicable to a specific license ISFSI, as those provisions of the final rule only apply to general licenses.

In the case of a decommissioned facility that does operate under a Part 50 or 52 license, and thus, has a Part 72 general license, this rule would apply to the same extent as it would for any other Part 50 or Part 52 licensee. In this regard, there is no reason to treat a generally licensed ISFSI at a decommissioned site any differently than a generally licensed ISFSI at an active Part 50 or 52 facility.

The commenter may have assumed that this rule requires general licensees to apply the changes authorized by a CoC amendment to any previously loaded casks within the licensee's control. This is not correct. Under this final rule, the application of the changes authorized by a CoC amendment to a previously loaded cask is at the discretion of the general licensee; unless otherwise directed by the NRC, the general licensee can choose to continue to use the cask in accordance with the CoC under which the cask was loaded.

## **TIME-LIMITED AGING ANALYSES AND AGING MANAGEMENT PROGRAMS**

### **Comment 20:**

A commenter asked the NRC to clarify when aging management requirements apply to casks, such as a cask placed into service during the renewal term of a CoC.

### **Response:**

Aging management requirements only apply after the cask is in service for the length of time equal to the term certified by the cask's initial CoC. For example, if the term of the initial CoC is 20 years, and a cask is placed into service at the end of the 19<sup>th</sup> year, then the general licensee would need to begin implementing the appropriate aging management requirements at

the end of the 39<sup>th</sup> year, assuming the CoC was renewed. The appropriate time to initiate the aging management requirements will be identified in the NRC approval of a CoC renewal application. Specifically, the aging management requirements will be made conditions or specifications of the CoC and thus applicable to general licensees per § 72.212(b). The response to Question “H” in Section II was revised in light of this comment.

**Comment 21:**

A commenter stated that the TLAAAs for CoC renewals should be based on the CLB for the cask. The commenter described the CLB for the cask as the “original regulatory framework (i.e., the regulations, review guidance, and the associated SER(s)) under which the cask design, including amendments, was approved, plus any mandated or voluntary changes applied thereafter, as tracked by the CoC holder and discussed in the cask FSAR.” The commenter requested that the NRC clarify that at the time of renewal, the TLAAAs do not have to adopt the latest regulatory framework unless that is part of the cask’s CLB.

**Response:**

The amendments to this final rule do not include a definition for CLB. The cask designs approved, both initially and for renewal, under the provisions of Subpart L of Part 72 are generic in nature. The CLB is appropriate for site specific licensing actions, not generic cask designs.

The certificate holder must submit the TLAA when it applies for renewal of a given CoC (for a CoC renewal that encompasses CoC amendments that each may have different design basis, the certificate holder will have to address how the TLAA applies to each CoC amendment covered by the CoC). The TLAA is an implicit part of any new storage canister evaluation even though it is not explicitly identified in the existing regulations. This may be illustrated by consideration of operationally induced degradation. Specifically, applicants must consider

operationally induced degradation and its effects as part of the new design engineering process. Such an evaluation becomes part of the applicants' demonstration that a new cask design will perform as specified throughout its initial license period.

For a renewal, the applicant bears the same burden of showing that the materials of construction (or components) will perform as required during the extended operational period. This extended operational life may not have been addressed in the original design consideration. Consequently, TLAAAs (and other issues) were explicitly identified in the proposed regulations. The evaluation effort for renewal shifts its focus from material selection, as would be the case for a new design certification, to existing material condition/degradation assessment. The NRC staff determined that this subtle but important distinction be clearly identified.

**Comment 22:**

A commenter requested that the NRC clarify what is meant by the term "site aging issues," as stated in Section II, "Discussion," Question "AA" of the proposed rule. The commenter stated that CoC holders should identify the cask design features that are subject to age-related degradation and address them in a bounding manner for use of a cask beyond the initial CoC term. The commenter suggested that cask users review the CoC holder's aging analysis and perform their own analyses to supplement or supersede the CoC holder's generic analysis.

**Response:**

To clarify the NRC's intent, the statement in the response to Section II, "Discussion," Question "AA" of the proposed rule should have read: "site specific aging issues" rather than "site aging issues." The NRC asked whether the requirement for an AMP for CoC renewals

should fully address possible aging issues related to a general licensee's specific site (e.g., different environmental conditions).

The NRC agrees with the comment that CoC holders should identify the cask design features that are subject to age-related degradation and address them in a bounding manner for use of a cask beyond the initial CoC term. The NRC further agrees that general licensees should review the CoC holder's aging analysis and perform their own analyses to supplement or impose upon themselves a more restrictive analysis, but they cannot supersede the CoC holder's analysis. Therefore, the general licensees' analyses would address possible aging issues at their sites.

Question "AA" is not included in the SOC of this final rule because it was intended only to solicit comments on the particular items identified.

**Comment 23:**

A commenter stated that AMP requirements, aging analyses, and other technical documents should be evaluated for a 20-year license renewal term instead of the proposed 40-year license renewal term.

**Response:**

The basis for the NRC to increase specific ISFSI license terms from not to exceed 20 years to not to exceed 40 years is discussed in Question "C" of the "Discussion" section of the proposed rule. The NRC staff concluded that, with appropriate aging management and maintenance programs, license terms up to 40 years are reasonable and provide adequate protection of public health and safety.

## **GENERAL COMMENTS REGARDING SPENT FUEL STORAGE**

### **Comment 24:**

A commenter disagreed with the proposed rule's allowance for unlimited specific license renewals. The commenter expressed concern that the "indefinite nature of the length of time" the NRC describes for storage at an ISFSI could create a "national landscape of ISFSIs" at decommissioned sites. The commenter added that indefinite storage of fuel at ISFSIs is in conflict with "the Commission's long held policy that it 'does not intend to support storage of spent fuel for an indefinitely long period.'" The commenter also suggested that the NRC clearly state this policy in the Supplemental Information of the final rule document so that the "Commission's intent is clear and consistent across its regulatory landscape, including its Waste Confidence decision." The commenter stated that since 1998, the "federal government has had the obligation, by contract, to remove spent fuel and greater than class C waste from" nuclear power plant sites. The commenter urged the NRC to maintain its expectation "that these sites and future like sites not proliferate and linger as de facto long-term storage facilities."

### **Response:**

Please see the response to Comment 3.

### **Comment 25:**

A commenter agreed with the NRC that, with appropriate aging management and maintenance programs, 40-year licenses "are reasonable and protect public health and safety and the environment."

**Response:**

The NRC acknowledges the commenter's support for the not to exceed 40-year license terms.

**ENVIRONMENTAL REVIEW**

**Comment 26:**

A commenter stated that it is unclear how the requirements of the National Environmental Policy Act (NEPA) will be met. The commenter asked if licensees are required to submit an environmental report with their 40-year license renewal. The commenter concluded that license renewals should include a public environmental review process, such as a draft environmental assessment posted for public comment.

**Response:**

The NRC implements its obligations under NEPA through its regulations in 10 CFR Part 51. When a licensee applies for the renewal of a specific ISFSI license, the licensee is required to submit an environmental report under § 51.60(b)(1)(iii).

Under §§ 51.26, 51.27, 51.28, 51.29, 51.73 and 51.74, if the NRC prepares an environmental impact statement (EIS), the most comprehensive of the NEPA analyses, public participation would be required (the above provisions concern publication of a notice of intent, scoping, a request for comments on the draft EIS, and distribution of the draft EIS). If the NRC staff does not prepare an EIS, as determined by NRC staff's environmental assessment (EA), it will issue a finding of no significant impact (FONSI). The NRC may issue the FONSI in draft form, which will include a request for public comments (§ 51.33). Issuing a draft FONSI is

discretionary with the NRC. After a FONSI is finalized, it must be published in the *Federal Register* (§ 51.35).

## **MISCELLANEOUS ITEMS AND RULE LANGUAGE REVISIONS**

### **Comment 27:**

A commenter stated that, contrary to the first sentence of Section II, “Discussion,” Question “K” of the proposed rule, the current regulations do not require general licensees to maintain or submit a cask loading schedule to the NRC. The commenter requested that the NRC delete this language or revise the wording.

### **Response:**

The intent of the response to Question “K” of the proposed rule was to inform readers that general licensees keep track of loading and expiration dates of each loaded cask. The NRC understands, however, that this is not an express regulatory requirement. As such, the NRC has rephrased Question “K” to ask how the NRC tracks cask expiration dates and has made clarifying changes to the response to Question “K.” The registration letters required by the regulations, as amended by this final rule, provide the NRC with the requisite information to track cask expiration dates.

### **Comment 28:**

A commenter suggested that in Section II, “Discussion,” Question “T” of the proposed rule, the regulation should include a provision to permit licensees with existing § 72.212 reports to maintain the current regulatory numbering system and not have to revise these reports to reflect the redesignated sections within the proposed regulation.

**Response:**

The NRC disagrees with the comment that a provision be added to the regulations. There is no requirement to revise past § 72.212 reports to reflect the redesignation of provisions in § 72.212(b) resulting from the amendments of this final rule. Past § 72.212 reports can remain formatted to the regulation that was in effect at the time the report was written. Section 72.212 reports written after the effective date of this final rule must conform to the redesignations in the final rule.

**Comment 29:**

A commenter stated that the phrase “no later than 30 days after using (loading) that cask” in Section II, “Discussion,” Question “U” of the proposed rule and § 72.212(b)(2) is too vague. The commenter suggested replacing the above language with the following: “placing the cask in storage at the ISFSI” to clearly establish a start date.

**Response:**

In response to the commenter, the NRC is not going to change the rule text; this rule language has been in effect since 1990 without any controversy. Rather, the NRC is clarifying its response to Question “U” of this document by removing the term “loading” from the response. It is the NRC’s position that the 30-day clock starts when the loaded cask has been deployed in the ISFSI.

**Comment 30:**

A commenter stated that the phrase “casks of that design” as used in § 72.212(a)(3) is unclear. The commenter recommended that the phrase be clarified or revised to be consistent with the language used earlier in the section, “cask[s] fabricated under a Certificate of

Compliance.” The commenter added that if the same meaning is not intended, then the NRC should define the two phrases in § 72.3.

**Response:**

The NRC agrees with the comment that the terminology in § 72.212(a)(3) is not consistent; the NRC intended for the meaning to be the same in both instances. The NRC has revised § 72.212(a)(3) and it no longer contains the phrase “casks of that design.”

**Comment 31:**

A commenter asked whether “cask user or user’s representative,” as used in § 72.212(a)(3), is equivalent to the term “any licensee,” as used in § 72.240(a). The commenter concluded that if these terms are equivalent, then the NRC should use the same term in both sections of the rule.

**Response:**

The final rule makes several revisions to § 72.212(a)(3), including deletion of the language referring to “any cask user or user’s representative.” The NRC staff concluded that this language was redundant of the language in § 72.240(a). This final rule also revises § 72.240(a) to allow a licensee, a licensee’s representative, or another certificate holder to apply for a cask renewal in the event that the original certificate holder is either no longer in business or chooses not to apply for renewal of the cask.

**Comment 32:**

A commenter requested that in § 72.212(b)(8), the NRC change “§ 50.59(c)(2)” to “§ 50.59(c).” The commenter suggested that the review of cask storage activities may require a full evaluation under § 50.59, which includes §50.59(c)(1).

**Response:**

The NRC agrees with the comment. Section 72.212(b)(8) has been changed accordingly.

**Comment 33:**

A commenter asked whether the phrase “a new protected area” in section § 72.212(b)(9)(iii) only applies to an ISFSI located outside a nuclear power plant’s protected area. The commenter requested that the NRC clarify this phrase.

**Response:**

The phrase “a new protected area” in § 72.212(b)(9)(iii) applies only to an ISFSI that is physically separate from a reactor’s protected area. As a further point of clarification, all references to “new protected area(s)” in § 72.212(b)(9) apply only to an ISFSI physically separate from a reactor’s protected area. The NRC notes that the phrase “new protected area” has been part of the regulatory language after the rule was promulgated in 1990. The intent of this final rule is only to renumber § 72.212(b)(5)(iii) to § 72.212(b)(9)(iii). As additional background, the March 27, 2009, power reactor security rule (74 FR 13926, 13970) revised § 72.212(b)(5)(iii) to update the cross reference to the applicable Part 73 section and add the word “personnel” before the word “searches.”

**Comment 34:**

A commenter stated that § 72.212(b)(12) uses the terms “cask supplier” and “cask vendor.” The commenter suggested that these terms are inconsistent with the term “CoC holder,” which the NRC uses elsewhere in the proposed rule. The commenter concluded that the terminology should be consistent throughout the rule.

**Response:**

The NRC agrees with the comment that the terminology should be consistent. Therefore, the NRC has replaced the terms “cask supplier” and “cask vendor” in § 72.212(b)(12) with the term “CoC holder.”

**IV. Discussion of Final Amendments by Section****1. Section 72.3, Definitions.**

The final rule adds definitions for “Aging management program,” “Term certified by the cask’s Certificate of Compliance,” and “Time-limited aging analyses.”

**2. Section 72.24, Contents of application; Technical information.**

The amendment to § 72.24(c) requires applicants seeking initial specific licenses or specific licensees seeking renewals to demonstrate in sufficient detail that the design of the ISFSI or monitored retrievable storage installation (MRS) is capable of performing the intended functions for the term requested in the application.

**3. Section 72.42, Duration of license; renewal.**

The amendment to § 72.42(a) extends the term for both an initial specific license and a

license renewal from a term of not to exceed 20 years to a term not to exceed 40 years. The final rule also adds a requirement that specific licensees seeking renewals submit a TLAA and a description of the AMP. Any license renewal application will be required to include an analysis that considers the effects of aging on SSCs important to safety for the requested renewal term.

The amendment to § 72.42(b) requires license renewal applications to include design bases information as documented in the most recently updated FSAR, as required by § 72.70.

4. Section 72.212, Conditions of general license issued under § 72.210.

The final rule makes several changes to § 72.212. The final rule revises § 72.212(a)(3) to clarify the term of the general license and to match the term of the general license to the term of the applicable CoC. The final rule amendment also clarifies that the term of the general license runs through any renewal periods, unless otherwise specified in the CoC. In addition, the final rule also amends § 72.212(a)(3) to clarify the general license term for those casks placed into service during the final renewal term of a CoC or during the term of a CoC that was not renewed. The final rule amendment also states that, upon expiration of the general license, all casks subject to that general license must be removed from service.

The final rule amends § 72.212(b) by redesignating and reorganizing the provisions of that section. The following table cross references the amended regulations with the regulations in effect immediately prior to the effective date of this final rule. Use of “modified” in Table 1 refers to a section whose content has been modified. Remaining table entries are either new provisions or provisions that have been redesignated but whose content is unchanged.

**Table 1 - Cross Reference of Final Regulations with Prior Regulations**

<b>Final Rule</b>	<b>Prior Rule</b>
§ 72.212(b)(1)	§ 72.212(b)(1)(i)
§ 72.212(b)(2)	§ 72.212(b)(1)(ii) (modified)
§ 72.212(b)(3)	New section not in prior rule
§ 72.212(b)(4)	New section not in prior rule
§ 72.212(b)(5)	§ 72.212(b)(2)(i) (modified)
§ 72.212(b)(5)(i)	§ 72.212(b)(2)(i)(A)
§ 72.212(b)(5)(ii)	§ 72.212(b)(2)(i)(B)
§ 72.212(b)(5)(iii)	§ 72.212(b)(2)(i)(C)
§ 72.212(b)(6)	§ 72.212(b)(3) (modified)
§ 72.212(b)(7)	§ 72.212(b)(2)(ii) (modified)
§ 72.212(b)(8)	§ 72.212(b)(4) (modified)
§ 72.212(b)(9)	§ 72.212(b)(5)
§ 72.212(b)(9)(i)	§ 72.212(b)(5)(i)
§ 72.212(b)(9)(ii)	§ 72.212(b)(5)(ii)
§ 72.212(b)(9)(iii)	§ 72.212(b)(5)(iii)
§ 72.212(b)(9)(iv)	§ 72.212(b)(5)(iv)
§ 72.212(b)(9)(v)	§ 72.212(b)(5)(v)
§ 72.212(b)(9)(vi)	§ 72.212(b)(5)(vi)
§ 72.212(b)(10)	§ 72.212(b)(6)
§ 72.212(b)(11)	§ 72.212(b)(7) (modified)
§ 72.212(b)(12)	§ 72.212(b)(8)(i)
§ 72.212(b)(12)(i)	§ 72.212(b)(8)(i)(A)
§ 72.212(b)(12)(ii)	§ 72.212(b)(8)(i)(B)
§ 72.212(b)(12)(iii)	§ 72.212(b)(8)(i)(C)
§ 72.212(b)(13)	§ 72.212(b)(9)
§ 72.212(b)(14)	§ 72.212(b)(10)
§ 72.212(c)	§ 72.212(b)(8)(ii) (modified)
§ 72.212(d)	§ 72.212(b)(8)(iii) (modified)
§ 72.212(e)	§ 72.212(b)(1)(iii)

The final rule redesignates current § 72.212(b)(1)(i) as § 72.212(b)(1) and makes minor editorial changes to this provision.

The final rule redesignates current § 72.212(b)(1)(ii) as § 72.212(b)(2) and further revises the provision to add a requirement that general licensees, when registering a cask no later than 30 days after loading, include the CoC amendment number, if applicable.

The final rule adds a new provision, § 72.212(b)(3), that requires general licensees to ensure that each cask used by the general licensee conforms to the terms, conditions, and

specifications of a CoC or an amended CoC listed in § 72.214. Partial or selective application of the terms, conditions, and specifications of a CoC or an amended CoC, without prior NRC approval, may result in a cask that is in an unanalyzed condition and is therefore, prohibited.

The final rule adds a new provision, § 72.212(b)(4), that requires general licensees to register those previously loaded casks no later than 30 days after applying the changes authorized by an amended CoC.

The final rule revises § 72.212(b)(2)(i) by requiring general licensees to prepare written evaluations before applying the changes authorized by an amended CoC to a previously loaded cask. Thus, the revised rule requires a written evaluation before loading the cask with spent fuel and an additional written evaluation before any changes authorized by a CoC amendment are applied to a previously loaded cask. The final rule redesignates current § 72.212(b)(2)(i) as § 72.212(b)(5).

The final rule revises § 72.212(b)(2)(i) to state that the written evaluation must establish that the cask, once loaded with spent fuel or after changes authorized by an amended CoC have been applied, will conform to the terms, conditions, and specifications of a CoC or amended CoC listed in § 72.214, and redesignates current § 72.212(b)(2)(i)(A) as § 72.212(b)(5)(i). The final rule redesignates current §§ 72.212(b)(2)(i)(B) and (C) as §§ 72.212(b)(5)(ii) and (iii), respectively.

The final rule redesignates current § 72.212(b)(3) as § 72.212(b)(6) and revises this provision to add a reference to an amended CoC and to update the cross-reference to paragraph (b)(5).

The final rule redesignates current § 72.212(b)(2)(ii) as § 72.212(b)(7) and revises this provision to add a requirement to evaluate any changes to the site parameters determination and analyses required by § 72.212(b)(6), using the requirements of § 72.48.

The final rule redesignates current § 72.212(b)(4) as § 72.212(b)(8).

The final rule revises current § 72.212(b)(5) to reflect changes made by the final rulemakings dated October 24, 2008, and March 27, 2009, and redesignates current §§ 72.212(b)(5) and (b)(6) as §§ 72.212(b)(9) and (b)(10), respectively (see “Note on October 24, 2008, and March 27, 2009, Final Rule Revisions to § 72.212(b)(5), and Redesignation of § 72.212(b)(5) to § 72.212(b)(9)” at the end of this Section IV, below).

The final rule redesignates current § 72.212(b)(7) as § 72.212(b)(11) and revises this provision to add references to an amended CoC. The final rule also adds language to clarify that a licensee must comply with the technical specifications of the CoC, in addition to the terms and conditions of the CoC. Further, the revised language requires the licensee to comply with the terms, conditions, and specifications of the amended CoC for those casks to which the licensee has applied the changes of an amended CoC. The revised language further provides that licensees must also comply with the requirements of any AMP put into effect as a condition of the NRC approving a CoC renewal application.

The final rule redesignates current §§ 72.212(b)(8)(i), (b)(9), and (b)(10) as §§ 72.212(b)(12), (b)(13), and (b)(14), respectively.

The final rule redesignates current §§ 72.212(b)(8)(ii), (b)(8)(iii), and 72.212(b)(1)(iii) as §§ 72.212(c), (d), and (e), respectively, and makes conforming cross-reference changes.

5. Section 72.230, Procedures for spent fuel storage cask submittals.

The final rule revises § 72.230(b) by adding language that establishes the term for a period not to exceed 40 years. The final rule further amends § 72.230(b) by replacing the words “for a period of at least 20 years” with “the term proposed in the application.”

6. Section 72.236, Specific requirements for spent fuel storage cask approval and fabrication.

The final rule revises § 72.236(g) by adding language that requires spent fuel storage casks to be designed to store spent fuel safely for the term proposed in the application, eliminating the current language that requires the cask design to store spent fuel safely for a minimum of 20 years.

7. Section 72.238, Issuance of an NRC Certificate of Compliance.

The final rule revises § 72.238 by adding language that establishes the term for a CoC to be “not to exceed 40 years.”

8. Section 72.240 Conditions for spent fuel storage cask renewal.

The final rule revises the heading of § 72.240 and the language of §§ 72.240(a), (b), and (d) by replacing the word “reapproval” with “renewal.” The final rule further revises § 72.240(a) to establish that the CoC renewal term shall be “not to exceed 40 years.” The final rule also revises § 72.240(a) to clarify that in the event that a certificate holder does not apply for a CoC renewal, any general licensee that uses this cask model under the general license issued under § 72.210, any licensee’s representative, or another certificate holder may apply for renewal of the CoC.

The final rule adds a new § 72.240(c) to require the safety analysis report accompanying the renewal application to include design bases information as documented in the most recently updated FSAR, a TLAA of SSCs important to safety, and a description of the program for management of issues associated with aging that could adversely affect structures, systems, and components important to safety. The final rule redesignates § 72.240(c) as § 72.240(d) and revises this provision to add a requirement that any CoC renewal application must demonstrate

compliance with the QA provisions of Subpart G of Part 72. The final rule also revises the last sentence of the provision to improve its readability.

The final rule adds a new § 72.240(e) that states the NRC may, as part of the approval of a CoC renewal application, revise the terms, condition, and specifications of the CoC to require that the licensee implement an AMP.

*Note on October 24, 2008, and March 27, 2009, Final Rule Revisions to § 72.212(b)(5), and Redesignation of § 72.212(b)(5) to § 72.212(b)(9):*

This final rule redesignates § 72.212(b)(5) as § 72.212(b)(9). On October 24, 2008 (73 FR 63545, 63573), the NRC issued a final rule, "Protection of Safeguards Information," that revised § 72.212 by adding a new § 72.212(b)(5)(v) and redesignated the existing § 72.212(b)(5)(v) as § 72.212(b)(5)(vi). The new § 72.212(b)(5)(v) added language requiring a general licensee to "protect Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable." The redesignated § 72.212(b)(5)(vi) was otherwise unchanged and continued to require "for the purpose of this general license, the licensee is exempt from §§ 73.55(h)(4)(iii)(A) and 73.55(h)(5) of this chapter." These two cross referenced paragraphs dealt with reactor security requirements to (1) neutralize threats by interposing armed security personnel between the adversaries and reactor vital areas and (2) use force to prevent or impede attempted acts of theft of special nuclear material or radiological sabotage; and the NRC has historically not applied these requirements to ISFSI general licensees.

On March 27, 2009 (74 FR 13925, 13970), the NRC published a final rule "Power Reactor Security Requirements," which included a conforming change to the security requirements contained in § 72.212(b)(5)(ii)-(v). The changes to § 72.212(b)(5)(ii)-(v) in the March 2009 final rule were intended to clarify these regulations to better use plain language and

to update the exemption cross references to the reactor security regulations contained in § 73.55, due to the extensive revision of § 73.55.

In the March 2009 final rule, the NRC revised § 72.212(b)(5)(v) to update the exemption language to read “[f]or the purpose of this general license, the licensee is exempt from requirements to interdict and neutralize threats in § 73.55 of this chapter.” However, the amendatory language in the 2009 final rule (74 FR 13970, Item 8) which read “[i]n § 72.212, paragraphs (b)(5)(ii), (b)(5)(iii), (b)(5)(iv), and (b)(5)(v) are revised to read as follows:” should instead have read “[i]n § 72.212, paragraphs (b)(5)(ii), (b)(5)(iii), (b)(5)(iv), *and (b)(5)(vi)* are revised to read as follows:” (emphasis added). Consequently, the NRC staff in developing the March 2009 final rule both (1) unintentionally eliminated language that had been added by the Commission in the October 2008 final rule that required general ISFSI licensees to protect Safeguards Information; and (2) unintentionally retained the incorrect exemption language in § 72.212(b)(5)(vi) (referring to §§ 73.55(h)(4)(iii)(A) and 73.55(h)(5)). The provision designated as § 72.212(b)(5)(v) by the March 2009 final rule was intended to replace § 72.212(b)(5)(vi), but did not accomplish that because of the above described mistake in the amendatory language.

Accordingly, to correct these errors, this final rule removes § 72.212(b)(5)(vi) (which was put in place by the October 24, 2008, final rule) and reinstates the provision added by the October 24, 2008, rule and then deleted by the March 27, 2009, rule, as a new § 72.212(b)(9)(vi). The remaining provisions of § 72.212(b)(5) are redesignated from § 72.212(b)(5)(i)-(v) to § 72.212(b)(9)(i)-(v).

## **V. Criminal Penalties**

For the purpose of Section 223 of the Atomic Energy Act (AEA), the Commission is amending 10 CFR Part 72 under one or more of Sections 161b, 161i, or 161o of the AEA. Willful violations of the rule would be subject to criminal enforcement.

## **VI. Agreement State Compatibility**

Under the “Policy Statement on Adequacy and Compatibility of Agreement State Programs” approved by the Commission on June 30, 1997, and published in the *Federal Register* (62 FR 46517; September 3, 1997), this rule is classified as Compatibility Category “NRC.” Compatibility is not required for Category “NRC” regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the AEA, as amended, or the provisions of Title 10 of the CFR. Although an Agreement State may not adopt program elements reserved to NRC, it may wish to inform its licensees of certain requirements via a mechanism that is consistent with the particular State’s administrative procedure laws but does not confer regulatory authority on the State.

## **VII. Voluntary Consensus Standards**

The National Technology Transfer Act of 1995 (Pub. L. 104-113) requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless using such a standard is inconsistent with applicable law or otherwise impractical. In this final rule, the NRC is clarifying the terms for spent fuel storage cask designs, or CoCs, and ISFSI licenses. In addition, the final action also allows Part 72 general licensees to implement changes authorized by an amended CoC to a cask loaded under the initial CoC or an earlier amended CoC (a “previously loaded cask”). This action does not constitute the establishment of a standard that establishes generally applicable requirements. For this reason, the NRC concludes that the Act does not apply to this final rule.

## **VIII. Finding of No Significant Environmental Impact: Availability**

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, not to prepare an environmental impact statement for this final rule because the Commission has concluded on the basis of an environmental assessment that this final rule would not be a major Federal action significantly affecting the quality of the human environment. The NRC has prepared an environmental assessment and, on the basis of this environmental assessment, has made a finding of no significant impact. The amendments are procedural in nature whereby extended license and CoC terms and the implementation of CoC amendments to previously loaded casks could be achieved by exemptions under the current regulations. They will not have a significant incremental effect on the environment. Therefore, the NRC has determined that an environmental impact statement is not necessary for this rulemaking.

The determination of this environmental assessment is that there will be no significant impact to the public from this action.

This conclusion was published in the environmental assessment that was made available for comment for 75 days after publication of the proposed rule at the NRC Public Document Room, Room O1-F21, 11555 Rockville Pike, Rockville, MD 20852. No comments were received on the content of the environmental assessment. The environmental assessment is also available in ADAMS, accession number ML100710441.

## **IX. Paperwork Reduction Act Statement**

This rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget, control number 3150-0132. The burden to

the public for these information collections is estimated to average -0.33 hours per response (or a reduction of approximately 1 hour for every three responses).

Send comments on any aspect of these information collections, including suggestions for reducing the burden, to the Information Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to *Infocollects.Resource@NRC.gov* and to the Desk Officer, Christine Kymn, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0132), Office of Management and Budget, Washington, DC 20503. You may also e-mail comments to *Christine\_J\_Kymn@omb.eop.gov* or comment by telephone at 202-395-4638.

#### Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

### **X. Regulatory Analysis**

The Commission has prepared a regulatory analysis on this regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The analysis is available in the NRC Public Document Room, Room O1-F21, 11555 Rockville Pike, Rockville, MD 20852, and in ADAMS, Accession Number ML100710139. As part of the proposed rule, the NRC sought public comments on the draft regulatory analysis. The NRC did not receive any comments that addressed the regulatory analysis.

## **XI. Regulatory Flexibility Certification**

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule does not have a significant economic impact on a substantial number of small entities. The majority of companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

## **XII. Backfit Analysis**

The NRC has determined that the backfit rule (§§ 50.109, 72.62, and the finality provisions of 10 CFR Part 52) does not apply to this final rule because these amendments do not involve any provisions that would impose backfits as defined in 10 CFR Chapter I. These amendments do not require the addition, elimination, or modification of structures, systems, or components of an ISFSI or of the procedures or organization required to operate an ISFSI. Therefore, a backfit analysis is not required.

## **XIII. Congressional Review Act**

Under the Congressional Review Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of OMB.

## List of Subjects in 10 CFR Part 72

Administrative practice and procedure, Hazardous waste, Nuclear materials, Occupational safety and health, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistle blowing.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; the Nuclear Waste Policy Act of 1982, as amended; and 5 U.S.C. 552 and 553; the NRC is adopting the following amendments to 10 CFR Part 72.

### **PART 72-LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE**

1. The authority citation for Part 72 continues to read as follows:

**Authority:** Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168);

sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec.651(e), Pub. L. 109-58, 119 Stat. 806-10 (42 U.S.C. 2014, 2021, 2021b, 2111).

Section 72.44(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100-203, 101 Stat. 1330-232, 1330-236 (42 U.S.C. 10162(b), 10168(c), (d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10165(g)). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2224 (42 U.S.C. 10101, 10137(a), 10161(h)). Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

2. In § 72.3, definitions for *AMP*, *Term certified by the cask's Certificate of Compliance*, and *TLAAs* are added in alphabetical order to read as follows:

**§ 72.3 Definitions.**

\* \* \* \* \*

*AMP*, for the purposes of this part, means a program for addressing aging effects that may include prevention, mitigation, condition monitoring, and performance monitoring.

\* \* \* \* \*

*Term certified by the cask's Certificate of Compliance*, for the purposes of this part, means, for an initial CoC, the period of time commencing with the CoC effective date and ending with the CoC expiration date, and for a renewed CoC, the period of time commencing with the most recent CoC renewal date and ending with the CoC expiration date.

TLAAs, for the purposes of this part, means those licensee or certificate holder calculations and analyses that:

(1) Involve structures, systems, and components important to safety within the scope of the license renewal, as delineated in subpart F of this part, or within the scope of the spent fuel storage certificate renewal, as delineated in subpart L of this part, respectively;

(2) Consider the effects of aging;

(3) Involve time-limited assumptions defined by the current operating term, for example, 40 years;

(4) Were determined to be relevant by the licensee or certificate holder in making a safety determination;

(5) Involve conclusions or provide the basis for conclusions related to the capability of structures, systems, and components to perform their intended safety functions; and

(6) Are contained or incorporated by reference in the design bases.

3. In § 72.24, revise the introductory text of paragraph (c) to read as follows:

**§ 72.24 Contents of application: Technical information.**

\* \* \* \* \*

(c) The design of the ISFSI or MRS in sufficient detail to support the findings in § 72.40 for the term requested in the application, including:

\* \* \* \* \*

4. In § 72.42, revise paragraphs (a) and (b) to read as follows:

**§ 72.42 Duration of license; renewal.**

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

(1) TLAAAs that demonstrate that structures, systems, and components important to safety will continue to perform their intended function for the requested period of extended operation; and

(2) A description of the AMP for management of issues associated with aging that could adversely affect structures, systems, and components important to safety.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of subpart B of this part at least 2 years before the expiration of the existing license. The application must also include design bases information as documented in the most recently updated FSAR as required by § 72.70. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference provided that these references are clear and specific.

\* \* \* \* \*

5. In § 72.212, revise paragraphs (a)(3) and (b) and add paragraphs (c), (d), and (e) to read as follows:

**§ 72.212 Conditions of general license issued under § 72.210.**

(a) \* \* \*

(3) The general license for the storage of spent fuel in each cask fabricated under a Certificate of Compliance shall commence upon the date that the particular cask is first used by the general licensee to store spent fuel, shall continue through any renewals of the Certificate of Compliance, unless otherwise specified in the Certificate of Compliance, and shall terminate when the cask's Certificate of Compliance expires. For any cask placed into service during the final renewal term of a Certificate of Compliance, or during the term of a Certificate of Compliance that was not renewed, the general license for that cask shall terminate after a storage period not to exceed the length of the term certified by the cask's Certificate of Compliance. Upon expiration of the general license, all casks subject to that general license must be removed from service.

(b) The general licensee must:

(1) Notify the Nuclear Regulatory Commission using instructions in § 72.4 at least 90 days before first storage of spent fuel under this general license. The notice may be in the form of a letter, but must contain the licensee's name, address, reactor license and docket numbers, and the name and means of contacting a person responsible for providing additional information concerning spent fuel under this general license. A copy of the submittal must be sent to the administrator of the appropriate Nuclear Regulatory Commission regional office listed in appendix D to part 20 of this chapter.

(2) Register use of each cask with the Nuclear Regulatory Commission no later than 30 days after using that cask to store spent fuel. This registration may be accomplished by submitting a letter using instructions in § 72.4 containing the following information: the licensee's name and address, the licensee's reactor license and docket numbers, the name and title of a person responsible for providing additional information concerning spent fuel storage under this general license, the cask certificate number, the CoC amendment number to which the cask conforms, unless loaded under the initial certificate, cask model number, and the cask identification number. A copy of each submittal must be sent to the administrator of the appropriate Nuclear Regulatory Commission regional office listed in appendix D to part 20 of this chapter.

(3) Ensure that each cask used by the general licensee conforms to the terms, conditions, and specifications of a CoC or an amended CoC listed in § 72.214.

(4) In applying the changes authorized by an amended CoC to a cask loaded under the initial CoC or an earlier amended CoC, register each such cask with the Nuclear Regulatory Commission no later than 30 days after applying the changes authorized by the amended CoC. This registration may be accomplished by submitting a letter using instructions in § 72.4 containing the following information: the licensee's name and address, the licensee's reactor license and docket numbers, the name and title of a person responsible for providing additional information concerning spent fuel storage under this general license, the cask certificate number, the CoC amendment number to which the cask conforms, cask model number, and the cask identification number. A copy of each submittal must be sent to the administrator of the appropriate Nuclear Regulatory Commission regional office listed in appendix D to part 20 of this chapter.

(5) Perform written evaluations, before use and before applying the changes authorized by an amended CoC to a cask loaded under the initial CoC or an earlier amended CoC, which establish that:

(i) The cask, once loaded with spent fuel or once the changes authorized by an amended CoC have been applied, will conform to the terms, conditions, and specifications of a CoC or an amended CoC listed in § 72.214;

(ii) Cask storage pads and areas have been designed to adequately support the static and dynamic loads of the stored casks, considering potential amplification of earthquakes through soil-structure interaction, and soil liquefaction potential or other soil instability due to vibratory ground motion; and

(iii) The requirements of § 72.104 have been met. A copy of this record shall be retained until spent fuel is no longer stored under the general license issued under § 72.210.

(6) Review the Safety Analysis Report referenced in the CoC or amended CoC and the related NRC Safety Evaluation Report, prior to use of the general license, to determine whether or not the reactor site parameters, including analyses of earthquake intensity and tornado missiles, are enveloped by the cask design bases considered in these reports. The results of this review must be documented in the evaluation made in paragraph (b)(5) of this section.

(7) Evaluate any changes to the written evaluations required by paragraphs (b)(5) and (b)(6) of this section using the requirements of § 72.48(c). A copy of this record shall be retained until spent fuel is no longer stored under the general license issued under § 72.210.

(8) Before use of the general license, determine whether activities related to storage of spent fuel under this general license involve a change in the facility Technical Specifications or

require a license amendment for the facility pursuant to § 50.59(c) of this chapter. Results of this determination must be documented in the evaluations made in paragraph (b)(5) of this section.

(9) Protect the spent fuel against the design basis threat of radiological sabotage in accordance with the same provisions and requirements as are set forth in the licensee's physical security plan pursuant to § 73.55 of this chapter with the following additional conditions and exceptions:

(i) The physical security organization and program for the facility must be modified as necessary to assure that activities conducted under this general license do not decrease the effectiveness of the protection of vital equipment in accordance with § 73.55 of this chapter;

(ii) Storage of spent fuel must be within a protected area, in accordance with § 73.55(e) of this chapter, but need not be within a separate vital area. Existing protected areas may be expanded or new protected areas added for the purpose of storage of spent fuel in accordance with this general license;

(iii) For the purpose of this general license, personnel searches required by § 73.55(h) of this chapter before admission to a new protected area may be performed by physical pat-down searches of persons in lieu of firearms and explosives detection equipment;

(iv) The observational capability required by § 73.55(i)(3) of this chapter as applied to a new protected area may be provided by a guard or watchman on patrol in lieu of video surveillance technology;

(v) For the purpose of this general license, the licensee is exempt from requirements to interdict and neutralize threats in § 73.55 of this chapter; and

(vi) Each general licensee that receives and possesses power reactor spent fuel and other radioactive materials associated with spent fuel storage shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(10) Review the reactor emergency plan, quality assurance program, training program, and radiation protection program to determine if their effectiveness is decreased and, if so, prepare the necessary changes and seek and obtain the necessary approvals.

(11) Maintain a copy of the CoC and, for those casks to which the licensee has applied the changes of an amended CoC, the amended CoC, and the documents referenced in such Certificates, for each cask model used for storage of spent fuel, until use of the cask model is discontinued. The licensee shall comply with the terms, conditions, and specifications of the CoC and, for those casks to which the licensee has applied the changes of an amended CoC, the terms, conditions, and specifications of the amended CoC, including but not limited to, the requirements of any AMP put into effect as a condition of the NRC approval of a CoC renewal application in accordance with § 72.240.

(12) Accurately maintain the record provided by the CoC holder for each cask that shows, in addition to the information provided by the CoC holder, the following:

- (i) The name and address of the CoC holder or lessor;
- (ii) The listing of spent fuel stored in the cask; and
- (iii) Any maintenance performed on the cask.

(13) Conduct activities related to storage of spent fuel under this general license only in accordance with written procedures.

(14) Make records and casks available to the Commission for inspection.

(c) The record described in paragraph (b)(12) of this section must include sufficient information to furnish documentary evidence that any testing and maintenance of the cask has been conducted under an NRC-approved quality assurance program.

(d) In the event that a cask is sold, leased, loaned, or otherwise transferred to another registered user, the record described in paragraph (b)(12) of this section must also be transferred to and must be accurately maintained by the new registered user. This record must be maintained by the current cask user during the period that the cask is used for storage of spent fuel and retained by the last user until decommissioning of the cask is complete.

(e) Fees for inspections related to spent fuel storage under this general license are those shown in § 170.31 of this chapter.

6. In § 72.230, revise paragraph (b) to read as follows:

**§ 72.230 Procedures for spent fuel storage cask submittals.**

\* \* \* \* \*

(b) Casks that have been certified for transportation of spent fuel under part 71 of this chapter may be approved for storage of spent fuel under this subpart. An application must be submitted in accordance with the instructions contained in § 72.4, for a proposed term not to

exceed 40 years. A copy of the CoC issued for the cask under part 71 of this chapter, and drawings and other documents referenced in the certificate, must be included with the application. A safety analysis report showing that the cask is suitable for storage of spent fuel, for the term proposed in the application, must also be included.

\* \* \* \* \*

7. In § 72.236, revise paragraph (g) to read as follows:

**§ 72.236 Specific requirements for spent fuel storage cask approval and fabrication.**

\* \* \* \* \*

(g) The spent fuel storage cask must be designed to store the spent fuel safely for the term proposed in the application, and permit maintenance as required.

\* \* \* \* \*

8. Revise § 72.238 to read as follows:

**§ 72.238 Issuance of an NRC Certificate of Compliance.**

A Certificate of Compliance for a cask model will be issued by NRC for a term not to exceed 40 years on a finding that the requirements in § 72.236(a) through (i) are met.

9. In § 72.240, revise the section heading and paragraphs (a), (b), and (c), redesignate paragraph (c) as (d), and add new paragraphs (c) and (e) to read as follows:

**§ 72.240 Conditions for spent fuel storage cask renewal.**

(a) The certificate holder may apply for renewal of the design of a spent fuel storage cask for a term not to exceed 40 years. In the event that the certificate holder does not apply for a cask design renewal, any licensee using a spent fuel storage cask, a representative of such licensee, or another certificate holder may apply for a renewal of that cask design for a term not to exceed 40 years.

(b) The application for renewal of the design of a spent fuel storage cask must be submitted not less than 30 days before the expiration date of the CoC. When the applicant has submitted a timely application for renewal, the existing CoC will not expire until the application for renewal has been determined by the NRC.

(c) The application must be accompanied by a safety analysis report (SAR). The SAR must include the following:

(1) Design bases information as documented in the most recently updated final safety analysis report (FSAR) as required by § 72.248;

(2) Time-limited aging analyses that demonstrate that structures, systems, and components important to safety will continue to perform their intended function for the requested period of extended operation; and

(3) A description of the AMP for management of issues associated with aging that could adversely affect structures, systems, and components important to safety.

(d) The design of a spent fuel storage cask will be renewed if the conditions in subpart G of this part and § 72.238 are met, and the application includes a demonstration that the storage of spent fuel has not, in a significant manner, adversely affected structures, systems, and components important to safety.

(e) In approving the renewal of the design of a spent fuel storage cask, the NRC may revise the CoC to include terms, conditions, and specifications that will ensure the safe operation of the cask during the renewal term, including but not limited to, terms, conditions, and specifications that will require the implementation of an AMP.

Dated at Rockville, Maryland, this 10<sup>th</sup> day of February, 2011.

For the Nuclear Regulatory Commission.

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Annette Vietti-Cook,  
Secretary of the Commission.