

DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT  
FOR THE  
PROPOSED RULE  
AMENDING 10 CFR PART 72  
LICENSE AND CERTIFICATE OF COMPLIANCE TERMS

Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
April 2009

I. THE PROPOSED ACTION

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern licensing requirements for the independent storage of spent nuclear fuel. These proposed amendments include changes that clarify the term limits for dry storage cask Certificates of Compliance (CoCs) and independent spent fuel storage installation (ISFSI) specific licenses, 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”).

II. THE NEED FOR THE PROPOSED ACTION

This rulemaking is needed to improve the regulatory efficiency of 10 CFR Part 72, which provides requirements for: (a) site-specific ISFSI licenses; (b) a general license for the storage of spent fuel in ISFSIs at reactor sites, and (c) dry storage cask CoCs.

“Dry storage” of spent fuel assemblies involves storing the assemblies in sealed casks on concrete pads after the assemblies have been removed from a reactor’s spent fuel storage pool (“wet storage”). A site-specific license is one issued to a particular licensee for a particular ISFSI; a general license is authorized for licensees holding a Part 50 or 52 reactor license, provided the general licensee meets the requirements of Subpart K of 10 CFR Part 72, which provides requirements for general licenses for the storage of spent fuel at power reactor sites.

This proposed rulemaking would extend the initial and renewal license term limits for general and site-specific ISFSI licenses from a term of 20 years to a term not to exceed 40 years. Any license renewal application would be required to include an analysis that considers the effects of aging on structures, systems, and components (SSCs) important to safety for the requested renewal term. In approving the renewed site-specific licenses for the Surry and H.B. Robinson ISFSIs, the staff imposed certain aging management requirements. At the present time, there are no similar requirements for general licensees. Because the same approved cask system certified by a CoC could be used at both site-specific ISFSI sites and general license ISFSI sites, it is necessary and appropriate to impose the same aging management requirements on general licensees.

The rulemaking would establish a term not to exceed 40 years as the initial and renewal term limits for CoCs, whereas the current regulation does not specify a term. The current regulation, however, limits a general license to 20 years after the date that a particular cask model was first used by a general licensee to store spent fuel, unless the cask’s CoC is renewed, in which case the general license expires 20 years after the cask CoC renewal date. The rulemaking would remove the 20 year limit and instead would link the general license term to that of the CoC. Thus, the authority to use an approved cask under a general license, the CoC initial and renewal terms, and the site-specific license initial and renewal terms would be for terms not to exceed 40 years, thereby achieving regulatory consistency.

Under 10 CFR Part 72, dry storage cask fabricators may periodically upgrade a cask's design and seek NRC approval of CoC amendments. The NRC approval process for CoC amendments ensures that a proposed design upgrade will continue to result in a cask that can safely store spent fuel assemblies (i.e., within the cask's analyzed condition). Under the current regulations, 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. A general licensee seeking to implement changes from a later CoC amendment to a previously loaded cask must obtain NRC approval in the form of an exemption. The proposed rulemaking would allow general licensees to apply the changes of a CoC amendment to a previously loaded cask, without prior NRC approval, provided the cask conforms to the amended CoC and, thus, remains in the analyzed condition. The general licensee would prepare a written evaluation documenting conformance with the amended CoC. The proposed rulemaking would reduce the number of requests for exemptions that licensees must prepare and the NRC must evaluate, thus reducing the regulatory burden on licensees and saving NRC resources.

### III. ENVIRONMENTAL IMPACTS OF PROPOSED ACTION

The environmental impacts associated with storage of light water reactor spent fuel (including dry storage) have been previously considered in other Commission rules and licensing actions on which this assessment is based. The "Environmental Assessment for 10 CFR Part 72 Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste," NUREG-1092<sup>1</sup> (August 1984), and the Supplementary Information of the

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<sup>1</sup>Copies of NUREG-1092 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is also available for inspection and/or copying at the NRC Public Document Room, 11555 Rockville Pike, Rockville, MD 20852-2738.

proposed rule published in the *Federal Register* on May 27, 1986 (51 FR 19106), contain specific analyses showing that the potential environmental impacts from dry storage of spent fuel in casks are small. The “Environmental Assessment for Proposed Rule Entitled ‘Storage of Spent Nuclear Fuel in NRC-Approved Storage Casks at Nuclear Power Reactor Sites’” for the proposed rule published in the *Federal Register* on May 5, 1989 (54 FR 19379), assessed the environmental impact of dry cask storage and concluded with a finding of no significant impact.

Dry storage of spent fuel has a long history, both in the United States and other countries. The NRC has considered environmental impacts associated with dry storage of spent fuel in other Commission rulemakings and licensing actions on which this assessment is based. In the statements of consideration to the NRC's Waste Confidence rule issued in 1990 (55 FR 38474, 38482; September 18, 1990), the Commission stated that it did not dispute a conclusion from a 1988 European study that dry spent fuel storage is safe and environmentally acceptable for a period of 100 years. The Commission further stated that spent fuel can be stored safely and without significant environmental impact, in either wet storage or in wet storage followed by dry storage, for at least 100 years (55 FR 38511).

Environmental impacts caused by dry cask storage systems for spent fuel under either a site-specific or general license are not considered significant. No effluents have been detected from the sealed dry cask storage systems. However, activities associated with cask loading and decontamination may result in some small incremental liquid and gaseous effluent. Cask loading and decontamination will be conducted under 10 CFR Part 50 reactor operating licenses and effluents will be controlled within reactor technical specifications. Because reactor sites are relatively large, any incremental doses to the public offsite due to direct radiation exposure from the spent fuel storage casks are expected to be small and, even when combined with the dose contribution from reactor operations, will be well within the annual dose equivalent of 0.25 mSv (25 mrem) limit to the whole body specified in 10 CFR 72.104. Incremental impacts on collective

occupational exposure due to dry cask storage of spent fuel under either a site-specific or general license are expected to be only a small fraction of that which occurs from operation of the nuclear power station.

The NRC has determined that the proposed amendments to 10 CFR Part 72, if enacted, would not change the current safety and environmental requirements for the storage of spent nuclear fuel so that no change in environmental impact is anticipated. Although the proposed rulemaking would extend the initial and renewal license durations for ISFSIs, all ISFSIs will continue to remain under the NRC's regulatory control and inspections regime. In this regard, recent experience has shown that after a loaded storage cask is placed on the storage pad, relatively few inspection issues arise due to the passive nature of these facilities.

In addition, the proposed rulemaking amendments do not involve any change to the NRC's requirements for cask design. Applications for renewals of site-specific ISFSI licenses and CoC designs would be required to demonstrate, in time-limited aging analyses and in a description of an aging management program, that structures, systems, and components important to safety will continue to perform their intended function for the requested period of extended operation.

Allowing general licensees to apply changes authorized by CoC amendments to previously loaded casks without prior NRC approval would not have any significant effect on the environment, provided that the cask conform to the terms, conditions, and specifications of the amended CoC. Each CoC amendment requires an NRC rulemaking before the amendment is effective. In these previous CoC amendment rulemaking proceedings, the Commission determined that compliance with the requirements of 10 CFR Part 72 will ensure adequate protection of public health and safety. The NRC, through a safety evaluation report for the cask system in the rulemaking, has determined that if the conditions specified in the CoC are met, adequate protection of public health and safety will be maintained.

Based on this assessment of the proposed rule, the Commission finds that the flexibility to request longer initial and renewal ISFSI license or CoC terms, and the flexibility for general licensees to apply changes authorized by CoC amendments to previously loaded casks, would not have a significant environmental impact. The NRC concludes that the proposed rulemaking is procedural in nature.

#### IV. ALTERNATIVES TO THE PROPOSED ACTION

The alternative to this proposed action is to take no action. This would leave in place the current regulations. The NRC rejected this alternative because applicants applying for longer licenses and CoC terms, or general licensees implementing later amendments to previously loaded casks, would be forced to seek exemptions from the current regulations. Whether the proposed regulatory or current exemption method is used, the environmental impacts would be the same. Therefore, given that the proposed rulemaking will have no significant effect on the environment but will reduce burdens, no further alternatives need be considered.

#### V. ALTERNATIVE USE OF RESOURCES

There are no irreversible commitments of resources determined in this assessment.

#### VI. AGENCIES AND PERSONS CONTACTED

No agencies or persons outside the NRC were contacted in connection with the preparation of this draft environmental assessment.

## VII. FINDING OF NO SIGNIFICANT IMPACT

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, that the proposed amendments are not a major Federal action significantly affecting the quality of the human environment, and therefore, an environmental impact statement is not required.

The proposed amendments are procedural in nature whereby extended term limits for initial and renewal license and CoC terms and the implementation of CoC amendments to previously loaded casks could be achieved either by exemptions under the current regulations or by the proposed amendments. There will not be a significant effect on the environment in either case. 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. However, because the NRC welcomes public participation, comments on any aspect of the Environmental Assessment may be submitted to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Rulemakings and Adjudications Staff.