

3. Require general licensees to design cask storage pads and areas to adequately account for dynamic loads, in addition to static loads. (§ 72.212)

III. Applicability

This section clarifies the applicability of the new § 72.103 for Part 72 specific licensees, and modified § 72.212(b)(2)(i)(B) for Part 72 general licensees.

Applicability of New § 72.103

(1) Applicants who apply on or after the effective date of the final rule, for a part 72 specific license for a dry cask storage ISFSI or MRS, located in either the western U.S. or in areas of known seismic activity in the eastern U.S., and not co-located with an NPP, will be required to address uncertainties in seismic hazard analysis by using appropriate analyses, such as a PSHA or suitable sensitivity analyses, for determining the DE.

(2) Applicants who apply on or after the effective date of the final rule, for a part 72 specific license for a dry cask storage ISFSI or MRS, located in either the western U.S. or in areas of known seismic activity in the eastern U.S., and co-located with an NPP, will have the

option of addressing uncertainties in seismic hazard analysis by using appropriate analyses, such as a PSHA or suitable sensitivity analyses, or using the existing design criteria for the NPP, for determining the DE. When the existing design criteria for the NPP are used for an ISFSI at a site with multiple NPPs, the criteria for the most recent NPP must be used.

(3) Applicants who apply on or after the effective date of the final rule, for a part 72 specific license for a dry cask storage ISFSI or MRS, located in the eastern U.S., except in areas of known seismic activity, will have the option of addressing uncertainties in seismic hazard analysis by using appropriate analyses, such as a PSHA or suitable sensitivity analyses, or using a standardized DE described by an appropriate response spectrum anchored at 0.25 g (subject to the conditions in new § 72.103(a)(1)), or using the existing design criteria for the most recent NPP (if applicable), for determining the DE.

(4) The new § 72.103 is not applicable to a general licensee at an existing NPP operating an ISFSI under a part 72 general license anywhere in the U.S.

The changes apply to the design basis of both a dry cask storage type ISFSI and MRS, because these facilities are similar in design. The NRC does not intend to revise the 10 CFR part 72 geological and seismological criteria as they apply to wet modes of storage because applications for this means of storage are not expected and it is not cost-effective to allocate resources to develop the technical bases for such an expansion of the rulemaking. The NRC also does not intend to revise the 10 CFR part 72 geological and seismological criteria as they apply to dry modes of storage that do not use casks because of the lack of experience in licensing these types of facilities.

The applicability of § 72.103 is summarized in the table below.

Applicability of Amended § 72.212(b)(2)(i)(B)

The changes in § 72.212(b)(2)(i)(B), regarding the evaluation of dynamic loads for the design of cask storage pads and areas, will apply to all general licensees for an ISFSI.

The applicability of the modified § 72.212(b)(2)(i)(B) is summarized in the table below.

SUMMARY OF APPLICABILITY

[Design Earthquake Ground Motion for ISFSI or MRS Specific-License Applicants for Dry Cask Modes of Storage on or after the Effective Date of the Final Rule]

Site condition	Specific-license applicant ¹
Western U.S., or areas of known seismic activity in the eastern U.S., not co-located with NPP.	Must use PSHA or suitable sensitivity analyses to account for uncertainties in seismic hazards evaluations ² .
Western U.S., or areas of known seismic activity in the eastern U.S., and co-located with NPP.	PSHA or suitable sensitivity analyses to account for uncertainties in seismic hazards evaluations ² , or existing NPP design criteria (multi-unit sites—use and co-located with the most recent criteria). NPP
Eastern U.S., and not in areas of known seismic activity	PSHA or suitable sensitivity analyses to account for uncertainties in seismic hazards evaluations, ² or existing NPP design criteria, if applicable (multi-unit sites—use the most recent criteria), or an appropriate response spectrum anchored at 0.25g (subject to the conditions in new § 72.103(a)(1)).

¹ New § 72.103 does not apply to general licensees. General licensees must satisfy the conditions specified in 10 CFR 72.212.

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

IV. Discussion

The NRC is amending certain sections of part 72 dealing with seismic siting and design criteria for a dry cask ISFSI or MRS. The NRC intends to leave the present § 72.102 in place to preserve the ISFSI licensing bases for applications before the effective date of the rule, and continue the present ISFSI or MRS licensing bases for applications for other than dry cask modes of storage. The

NRC is changing the heading of § 72.102, adding a new § 72.103, and modifying § 72.212(b)(2)(i)(B).

A. Change to 10 CFR 72.102

The heading of § 72.102 will be changed to clarify that the present requirements are applicable to ISFSI or MRS specific licensees or specific-license applicants before the effective date of the rule. The requirements of § 72.102 that applied to ISFSI or MRS

licensees, or license applicants for other than dry cask modes of storage will continue to apply.

B. New 10 CFR 72.103

New § 72.103 describes the seismic requirements for new specific-license applicants for dry cask storage at an ISFSI or MRS.