

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

[NRC-2016-0138]

RIN 3150-AJ78

**List of Approved Spent Fuel Storage Casks: EnergySolutions™ Corporation,
VSC-24 Ventilated Storage Cask System,
Renewal of Initial Certificate and Amendment Nos. 1–6**

AGENCY: Nuclear Regulatory Commission.

ACTION: Direct final rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is amending its spent fuel storage regulations by revising the EnergySolutions™ Corporation's (EnergySolutions or the applicant) VSC-24 Ventilated Storage Cask System listing within the "List of Approved Spent Fuel Storage Casks" to renew, for an additional 40 years, the initial certificate and Amendment Nos. 1–6 of Certificate of Compliance (CoC) No. 1007. The renewal of the initial certificate and Amendment Nos. 1–6 requires cask users to establish, implement, and maintain written procedures for aging management program (AMP) elements, including a lead cask inspection program, for VSC-24 Storage Cask structures, systems, and components (SSC) important to safety. Users must also conduct periodic "tollgate" assessments of new information on SSC aging effects and mechanisms to determine whether any element of an AMP addressing these effects and mechanisms requires revision to encompass the current state of knowledge. In

addition, the renewal of the initial certificate and Amendment Nos. 1–6 makes several other changes, described in Section IV, “Discussion of Changes,” in the SUPPLEMENTARY INFORMATION section of this document.

DATES: This direct final rule is effective September 20, 2017, unless significant adverse comments are received by August 7, 2017. If this direct final rule is withdrawn as a result of such comments, timely notice of the withdrawal will be published in the *Federal Register*. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date. Comments received on this direct final rule will also be considered to be comments on a companion proposed rule published in the Proposed Rules section of this issue of the *Federal Register*.

ADDRESSES: You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2016-0138. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.
- **E-mail comments to:** Rulemaking.Comments@nrc.gov. If you do not receive an automatic e-mail reply confirming receipt, then contact us at 301-415-1677.
- **Fax comments to:** Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.
- **Mail comments to:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

- **Hand deliver comments to:** 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. (Eastern Time) Federal workdays; telephone: 301-415-1677.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Robert D. MacDougall, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-5175; e-mail: Robert.MacDougall@nrc.gov.

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I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2016-0138 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2016-0138.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**
You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC-2016-0138 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Rulemaking Procedure

This direct final rule is limited to the renewal of the initial certificate and Amendment Nos. 1–6 of CoC No. 1007. The NRC is using the “direct final rule procedure” to issue these renewals because they represent a limited and routine change to an existing CoC that is expected to be noncontroversial. Adequate protection of public health and safety continues to be ensured.

This direct final rule will become effective on September 20, 2017. However, if the NRC receives significant adverse comments on this direct final rule by August 7, 2017, the NRC will publish a document that withdraws this action and will subsequently address the comments

received in a final rule as a response to the companion proposed rule published in the Proposed Rule section of this issue of the *Federal Register*. Absent significant modifications to the proposed revisions requiring republication, the NRC will not initiate a second comment period on this action.

A significant adverse comment is a comment where the commenter explains why the rule would be inappropriate, including challenges to the rule's underlying premise or approach, or would be ineffective or unacceptable without a change. A comment is adverse and significant if:

1) The comment opposes the rule and provides a reason sufficient to require a substantive response in a notice-and-comment process. For example, a substantive response is required when:

a) The comment causes the NRC staff to reevaluate (or reconsider) its position or conduct additional analysis;

b) The comment raises an issue serious enough to warrant a substantive response to clarify or complete the record; or

c) The comment raises a relevant issue that was not previously addressed or considered by the NRC staff.

2) The comment proposes a change or an addition to the rule, and it is apparent that the rule would be ineffective or unacceptable without incorporation of the change or addition.

3) The comment causes the NRC staff to make a change (other than editorial) to the rule, CoC, or technical specifications (TSs).

For detailed instructions on filing comments, please see the companion proposed rule published in the Proposed Rule section of this issue of the *Federal Register*.

III. Background

Section 218(a) of the Nuclear Waste Policy Act (NWPA) of 1982, as amended, requires that “the Secretary [of the Department of Energy] shall establish a demonstration program, in cooperation with the private sector, for the dry storage of spent nuclear fuel at civilian nuclear power reactor sites, with the objective of establishing one or more technologies that the [Nuclear Regulatory] Commission may, by rule, approve for use at the sites of civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission.” Section 133 of the NWPA states, in part, that “[the Commission] shall, by rule, establish procedures for the licensing of any technology approved by the Commission under Section 219(a) [sic: 218(a)] for use at the site of any civilian nuclear power reactor.”

To implement this mandate, the Commission approved dry storage of spent nuclear fuel in NRC-approved casks under a general license by publishing a final rule which added a new subpart K in part 72 of title 10 of the *Code of Federal Regulations* (10 CFR) entitled, “General License for Storage of Spent Fuel at Power Reactor Sites” (55 FR 29181; July 18, 1990). A general license authorizes a reactor licensee to store spent fuel in NRC-approved casks at a site that is licensed to operate a power reactor under 10 CFR parts 50 or 52. This rule also established a new subpart L in 10 CFR part 72 entitled, “Approval of Spent Fuel Storage Casks,” which contains procedures and criteria for obtaining NRC approval of spent fuel storage cask designs. The NRC subsequently issued a final rule on April 7, 1993 (58 FR 17967), that approved the VSC-24 Storage Cask System design, effective May 7, 1993, and added it to the list of NRC-approved cask designs in 10 CFR 72.214 as CoC No. 1007.

IV. Discussion of Changes

On October 12, 2012, EnergySolutions submitted an application to renew, for an additional 40 years, the initial certificate and Amendment Nos. 1–6 of CoC No. 1007 for the VSC-24 Storage Cask System (ADAMS Accession No. ML12290A139). EnergySolutions supplemented its request on: February 14, 2013 (ADAMS Accession No. ML130500219); April 4, 2014 (ADAMS Accession No. ML14099A192); October 24, 2014 (ADAMS Accession No. ML14301A283); and June 26, 2015 (ADAMS Accession No. ML15182A163). Because EnergySolutions filed its renewal application at least 30 days before the certificate expiration date of May 7, 2013, pursuant to the timely renewal provisions in 10 CFR 72.240(b), the initial issuance of the certificate and Amendment Nos. 1–6 of CoC No. 1007 did not expire.

The renewals of the initial certificate and its amendments were conducted in accordance with the renewal provisions in 10 CFR 72.240. This section of NRC spent fuel storage regulations authorizes the NRC staff to include any additional certificate conditions it deems necessary to ensure that the cask system's SSCs continue to perform their intended safety functions during the certificate's renewal period. The NRC staff has included additional conditions in the renewed certificates requiring the implementation of an approved AMP to ensure that VSC-24 Storage Cask System SSCs important to safety will continue to perform their intended functions during the extended storage period authorized by the renewal. These conditions will require users of the VSC-24 Storage Cask Systems to establish, implement, and maintain written procedures for each AMP element, including the lead cask inspection program, for VSC-24 Storage Cask Systems that will continue to be in use for more than 20 years. These

procedures must be consistent with the AMP descriptions in the applicant's Final Safety Analysis Report (FSAR).

The procedures must also include provisions for changing AMP elements as necessary, within the limitations specified in CoC conditions and TSs, to address new information derived from the results of AMP inspections and/or industry operating experience of aging effects. Each VSC-24 Storage Cask System general licensee must make and maintain records of periodic "tollgate" assessments as part of the "Operating Experience" element of each AMP. The purpose of these periodic tollgate assessments is to determine whether any AMP addressing an aging effect or mechanism requires revision to encompass the current state of knowledge. In addition, each future request for an amendment to the renewed CoCs must evaluate the amendment's impacts on aging management activities for the VSC-24 Storage Cask System. This evaluation may require modifications to time-limited aging analyses (TLAAs) and AMPs, including the lead cask inspection program, as appropriate.

The renewed certificates also contain additional conditions requested by EnergySolutions. The renewed initial certificate and Amendment Nos. 1–3 of CoC No. 1007 will prohibit the construction or placement into service of new VSC-24 SSCs under these CoC specifications. General licensee users with VSC-24 Storage Cask Systems under the initial certificate or Amendment Nos. 1–3 that are in service as of the renewal's effective date, however, may continue to perform SSC maintenance and repairs in accordance with the conditions of their applicable renewed CoC. General licensees that meet the conditions of the renewed Amendment Nos. 4–6 of CoC No. 1007 may load and store spent nuclear fuel in new VSC-24 Storage Cask Systems.

This direct final rule also includes additional design and operating conditions on the initial and all amendment certificates and their corresponding TSs to preclude the use of specific

cask components, and prohibit the storage of spent fuel above a certain burnup. These conditions were proposed by the certificate holder to ensure that the scope of the aging analyses provided in the renewal application extends only to VSC-24 Storage Cask System SSCs currently in service. The NRC staff confirmed that no VSC-24 Storage Cask Systems currently in service are affected by these design and operating conditions. These conditions would only apply to future VSC-24 Storage Cask System SSCs placed into service.

As documented in its safety evaluation report (SER), the NRC staff performed a detailed safety evaluation of the proposed CoC renewal request. There are no changes to the cask design or fabrication requirements in the proposed CoC renewals. Accordingly, the design of the cask would continue to prevent loss of containment, shielding, and criticality control. In its SER for the renewal of the VSC-24 Storage Cask System, the NRC has determined that if the conditions specified in the CoC to implement these regulations are met, adequate protection of public health and safety will be maintained.

This direct final rule revises the VSC-24 Storage Cask System listing in 10 CFR 72.214 by renewing for 40 more years the initial certificate and Amendment Nos. 1–6 of CoC No. 1007. The renewals consist of the changes previously described, as set forth in the renewed CoCs and their revised TSs. The revised TSs are identified in the SER.

V. Voluntary Consensus Standards

The National Technology Transfer and Advancement 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 the use of such a standard is inconsistent with applicable law or otherwise impractical. In this direct final rule, the NRC will revise the VSC-24 Storage Cask System design listed in § 72.214, “List of Approved Spent Fuel Storage Casks.”

This action does not constitute the establishment of a standard that contains generally applicable requirements.

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* on September 3, 1997 (62 FR 46517), this direct final 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 Atomic Energy Act of 1954, as amended, or the provisions of 10 CFR. Although an Agreement State may not adopt program elements reserved to the NRC, it may wish to inform its licensees of certain requirements using a mechanism consistent with the particular State’s administrative procedure laws, but so informing these licensees does not confer regulatory authority on the State.

VII. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, and well-organized manner that also follows other best practices appropriate to the subject or field and the intended audience. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, “Plain Language in Government Writing,” published June 10, 1998 (63 FR 31883).

VIII. Environmental Assessment and Finding of No Significant Environmental Impact

A. The Action

The action is to amend 10 CFR 72.214 by revising the VSC-24 Storage Cask System listing within the “List of Approved Spent Fuel Storage Casks” to renew, for an additional 40 years, the initial certificate and Amendment Nos. 1–6 of CoC No. 1007. The renewals of the initial certificate and Amendment Nos. 1–6 require each cask user to establish, implement, and maintain written procedures for AMP elements, including lead cask inspection programs, for VSC-24 Storage Cask System SSCs important to safety. Users must also conduct periodic “tollgate” assessments of new information on SSC aging effects and mechanisms to determine whether any element of an AMP addressing these effects and mechanisms requires revision to encompass the current state of knowledge. In addition, the renewal of the initial certificate and Amendment Nos. 1–6 makes several other changes, described in Section IV, “Discussion of Changes,” in the SUPPLEMENTARY INFORMATION section of this document. Finally, as with any NRC-approved cask system, the reactor licensee using these systems under a 10 CFR part 72 general license must also ensure that the reactor site parameters and potential site-boundary doses are within the scope of the cask system safety analysis report and reactor license.

Under the National Environmental Policy Act of 1969, as amended (NEPA), and the NRC’s regulations in subpart A of 10 CFR part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” the NRC has determined that this direct final rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement (EIS) is not required. The NRC has made a finding of no significant impact on the basis of this environmental assessment (EA).

B. The Need for the Action

This direct final rule is necessary to authorize the continued use of the VSC-24 Storage Cask System design by power reactor licensees for dry spent fuel storage at reactor sites. Specifically, this rule extends the expiration date for the VSC-24 Storage Cask System certificates for an additional 40 years, allowing a reactor licensee to continue using them under general license provisions in an independent spent fuel storage installation (ISFSI), the facility at which a holder of a power reactor operating license stores spent fuel in dry casks in accordance with 10 CFR part 72.

C. Environmental Impacts of the Action

The environmental impacts associated with spent fuel storage have been considered in a variety of NRC environmental reviews. The NUREG-1092, "Environmental Assessment for 10 CFR Part 72 - Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste," is dated August 1984 (ADAMS Accession No. ML091050510). In the May 27, 1986, proposed rule (51 FR 19106) amending 10 CFR part 72 to address an NWPA requirement, the SUPPLEMENTARY INFORMATION section contains additional analyses showing that the potential environmental impacts from storing spent fuel in dry casks are small. The NRC also evaluated the environmental impacts of spent fuel storage at generally licensed ISFSIs in "Environmental Assessment and Finding of No Significant Impact for Proposed Rule Entitled 'Storage of Spent Nuclear Fuel in NRC-Approved Storage Casks at Nuclear Power Reactor Sites,'" published in the *Federal Register* on May 5, 1989 (54 FR 19379).

On July 18, 1990 (55 FR 29181), the NRC issued a final rule amending 10 CFR part 72 to provide for the storage of spent fuel under a general license in cask designs approved by the NRC. In the EA for the 1990 final rule, the NRC analyzed the potential environmental impacts of using NRC-approved storage casks. This EA for the renewal of the initial certificate and

Amendment Nos. 1–6 of CoC No. 1007 tiers off of the EA for the July 18, 1990, final rule.

Tiering off of past EAs is a standard process under NEPA.

The NRC staff has determined that the environmental impacts of renewing the VSC-24 Storage Cask System certificates for an additional 40 years remain bounded by the EISs and EAs previously referenced. As required by 10 CFR 72.240, applications for renewal of a spent fuel storage CoC design are required to demonstrate, in TLAAAs and a description of an AMP, that SSCs important to safety will continue to perform their intended function for the requested renewal term. As discussed in the NRC staff's SER for the renewal of the VSC-24 Storage Cask System certificates, the NRC staff has approved conditions in the renewed CoCs requiring the general licensee to implement the AMPs described in the renewal application and incorporated into the storage system's FSAR. These conditions ensure that VSC-24 Storage Cask Systems will continue to perform their intended safety functions and provide adequate protection of public health and safety throughout the renewal period.

Incremental impacts from continued use of VSC-24 Storage Cask Systems under a general license for an additional 40 years are not considered significant. When the general licensee follows all procedures and administrative controls, including the conditions established as a result of this renewal, no effluents are expected from the sealed dry storage cask systems. Activities associated with cask loading and decontamination may result in some small incremental liquid and gaseous effluents, but these activities will be conducted under 10 CFR parts 50 or 52 reactor operating licenses, and effluents will be controlled within existing reactor site technical specifications. Because reactor sites are relatively large, any incremental offsite doses due to direct radiation exposure from the spent fuel storage casks are expected to be small, and when combined with the contribution from reactor operations, 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 exposures due to dry cask spent fuel storage are

expected to be only a small fraction of the exposures from operation of the nuclear power station.

The VSC-24 Storage Cask Systems are also designed to mitigate the effects of design basis accidents that could occur during storage. Design basis accidents account for human-induced events and the most severe natural phenomena reported for the site and surrounding area. Postulated accidents analyzed for an ISFSI include tornado winds and tornado-generated missiles, a design basis earthquake, a design basis flood, an accidental cask drop, lightning effects, fire, explosions, and other incidents.

During the promulgation of the amendments that added subpart K to 10 CFR part 72 (55 FR 29181; July 18, 1990), the NRC staff assessed the public health consequences of dry cask system storage accidents and sabotage events. In the supporting analyses for these amendments, the NRC staff determined that a release from a dry cask storage system would be comparable in magnitude to a release from the same quantity of fuel in a spent fuel storage pool. As a result of these evaluations, the NRC staff determined that, because of the physical characteristics of the storage casks and conditions of storage that include specific security provisions, the potential risk to public health and safety due to accidents or sabotage is very small.

Considering the specific design requirements for each accident or sabotage condition, the design of the cask would prevent loss of confinement, shielding, and criticality control. If there is no loss of confinement, shielding, or criticality control, the environmental impacts would be insignificant.

There are no changes to cask design or fabrication requirements in the renewed initial certificate or the renewed Amendment Nos. 1–6 that would result in an increase in occupational exposure or offsite dose rates from the implementation of the renewal of the initial certificate

and Amendment Nos. 1–6. Therefore, the occupational exposure or offsite dose rates would remain well within applicable 10 CFR part 20 limits.

Decommissioning of dry cask spent fuel storage systems under a general license would be carried out as part of a power reactor's site decommissioning plan. In general, decommissioning would consist of removing the spent fuel from the site, decontaminating cask surfaces, and decontaminating and dismantling the ISFSI where the casks were deployed. The casks would then be released for reuse or disposal. Under normal and off-normal operating conditions, no residual contamination is expected to be left behind on supporting structures. The incremental impacts associated with decommissioning dry cask storage installations is expected to represent a small fraction of the impacts of decommissioning an entire nuclear power station.

In summary, the proposed CoC changes will not result in any radiological or non-radiological environmental impacts that differ significantly from the environmental impacts evaluated in the EA supporting the July 18, 1990, final rule. Compliance with the requirements of 10 CFR parts 20 and 72 would ensure that adequate protection of public health and safety will continue. The NRC, in its SER for the renewal of the VSC-24 Storage Cask System, has determined that if the conditions specified in the CoC to implement these regulations are met, adequate protection of public health and safety will be maintained.

Based on the previously stated assessments and its SER for the requested renewal of the VSC-24 Storage Cask System certificates, the NRC has determined that the expiration date of this system in 10 CFR 72.214 can be safely extended for an additional 40 years, and that commercial nuclear power reactor licensees can continue using the system during this period under a general license without significant impacts on the human environment.

D. Alternative to the Action

The alternative to this action is to deny approval of the renewals and end this direct final rule. Under this alternative, the NRC would either: 1) require general licensees using VSC-24 Storage Cask Systems to unload the spent fuel from these systems and either return it to a spent fuel pool or re-load it into a different dry storage cask system listed in 10 CFR 72.214; or 2) require that users of existing VSC-24 Storage Cask Systems request site-specific licensing proceedings to continue storage in these systems.

The environmental impacts of requiring the licensee to unload the spent fuel and either return it to the spent fuel pool or re-load it into another NRC-approved cask system would result in increased radiological doses to workers. These increased doses would be due primarily to direct radiation from the casks while the workers unloaded, transferred, and re-loaded the spent fuel. These activities would consist of transferring the dry storage canisters to a cask handling building, opening the canister lid welds, returning the canister to a spent fuel pool or dry transfer facility, removing the fuel assemblies, and re-loading them, either into a spent fuel pool storage rack or another NRC-approved dry storage system. In addition to the increased occupational doses to workers, these activities may also result in additional liquid or gaseous effluents.

Alternatively, users of the dry cask storage system would need to apply for a site-specific license. Under this option for implementing the no-action alternative, interested licensees would have to prepare, and the NRC would have to review, each separate license application, thereby increasing the administrative burden upon the NRC and the costs to each licensee.

In summary, the no-action alternative would entail either more environmental impacts from transferring the spent fuel now in VSC-24 Storage Cask Systems, or impacts from multiple licensing actions that, in the aggregate, are likely to be less than spent fuel transfer activities but the same as, or more likely, greater than the preferred action.

E. Alternative Use of Resources

Renewal of the initial certificate and Amendment Nos. 1–6 of CoC No. 1007 for the VSC-24 Storage Cask System would not result in irreversible commitments of resources.

F. Agencies and Persons Contacted

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

G. Finding of No Significant Impact

The environmental impacts of the action have been reviewed under the requirements in 10 CFR part 51. Based on the foregoing EA, the NRC concludes that this rule entitled, “List of Approved Spent Fuel Storage Casks: EnergySolutions Corporation, VSC-24 Ventilated Storage Cask System, Renewal of Initial Certificate and Amendment Nos. 1–6,” will not have a significant impact on the human environment. Therefore, the NRC has determined that an EIS is not necessary for this direct final rule.

IX. Paperwork Reduction Act Statement

This direct final rule does not require any new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing collections of information were approved by the Office of Management and Budget (OMB), approval number 3150-0132.

Public Protection Notification

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

X. Regulatory Flexibility Certification

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the NRC certifies that this direct final rule will not, if issued, have a significant economic impact on a substantial number of small entities. This direct final rule affects only nuclear power plant licensees and the EnergySolutions Corporation. These entities 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).

XI. Regulatory Analysis

On July 18, 1990 (55 FR 29181), the NRC issued an amendment to 10 CFR part 72 to provide for the storage of spent nuclear fuel under a general license in cask designs approved by the NRC. Under this regulation, any nuclear power reactor licensee can use NRC-approved cask designs to store spent nuclear fuel if the licensee notifies the NRC in advance, the spent fuel is stored under the conditions specified in the cask's CoC, and the conditions of the general license are met. A list of NRC-approved cask designs is contained in 10 CFR 72.214. On April 7, 1993 (58 FR 17967), the NRC issued an amendment to 10 CFR part 72 that approved

the VSC-24 Storage Cask System design by adding it to the list of NRC-approved cask designs in 10 CFR 72.214.

On October 12, 2012, EnergySolutions requested a renewal of the initial certificate and Amendment Nos. 1–6 of VSC-24’s CoC No. 1007 for an additional 40 years beyond the initial certificate term (ADAMS Accession No. ML12290A139). EnergySolutions supplemented its request on: February 14, 2013 (ADAMS Accession No. ML130500219), April 4, 2014 (ADAMS Accession No. ML14099A192), October 24, 2014 (ADAMS Accession No. ML14301A283), and June 26, 2015 (ADAMS Accession No. ML15182A163). Because EnergySolutions filed its renewal application at least 30 days before the certificate expiration date of May 7, 2013, pursuant to the timely renewal provisions in 10 CFR 72.240(b), the initial issuance of the certificate and Amendment Nos. 1–6 of CoC No. 1007 did not expire.

The alternative to this action is to deny approval of the renewal of the initial certificate and Amendment Nos. 1–6 of CoC No. 1007 and end this direct final rule. Under this alternative, the NRC would either: 1) require general licensees using VSC-24 Storage Cask Systems to unload spent fuel from these systems and return it to a spent fuel pool or re-load it into a different dry storage cask system listed in 10 CFR 72.214; or 2) require that users of existing VSC-24 Storage Cask Systems request site-specific licensing proceedings to continue storage in these systems. Therefore, the no-action alternative would entail either more environmental impacts from transferring the spent fuel now in VSC-24 Storage Cask Systems, or impacts from multiple licensing actions that, in the aggregate, are likely to be less than spent fuel transfer activities but the same as, or more likely, greater than the preferred action.

Approval of this direct final rule is consistent with previous NRC actions. Further, as documented in the SER and the EA, this direct final rule will have no significant adverse impact on public health and safety or the environment. This direct final rule also has no significant identifiable impact on or benefit to other Government agencies. Based on this regulatory

analysis, the NRC concludes that the requirements of this direct final rule are commensurate with the NRC's responsibilities for public health and safety and the common defense and security. No other available alternative is believed to be as satisfactory, and therefore, this action is recommended.

XII. Backfitting and Issue Finality

The NRC has determined that the actions in this direct final rule do not require a backfit analysis because they either do not fall within the definition of backfitting under 10 CFR 72.62 or 10 CFR 50.109(a)(1), or they do not impact any general licensees currently using these systems. Additionally, the actions in this direct final rule do not impact issue finality provisions applicable to combined licenses under part 52.

This direct final rule renews CoC No. 1007 for the VSC-24 Storage Cask System, as currently listed in 10 CFR 72.214, "List of Approved Spent Fuel Storage Casks," to extend the expiration date of the initial certificate and Amendment Nos. 1–6 by 40 years. The renewed certificates would require implementation of an AMP for the 40 years after the storage cask system's initial 20-year service period. As part of the renewal application, EnergySolutions also requested some changes to the originally-certified systems that go beyond the aging management provisions and impose additional design and operating conditions on the certificates and their corresponding TSs to preclude the use of specified cask components, and prohibit the future storage of spent fuel above a certain burnup limit.

Renewing these certificates does not, with the exceptions noted in this section, fall within the definition of backfit under 10 CFR 72.62 or 10 CFR 50.109, or otherwise represent an inconsistency with the issue finality provisions applicable to combined licenses in 10 CFR part 52. Extending the certificates' effective dates for 40 more years and requiring the

implementation of AMPs does not impose any modification or addition to the design of an SSC of a cask system, or to the procedures or organization required to operate the system during the initial 20-year storage period of the system, as authorized by the current certificate. General licensees that have loaded these casks, or that load these casks in the future under the specifications of the applicable certificate, may continue to store spent fuel in these systems for the initial 20-year storage period authorized by the original certificate. The AMPs required to be implemented by this renewal are only required to be implemented after the storage cask system's initial 20-year service period ends. As explained in the 2011 final rule that amended 10 CFR part 72 (76 FR 8872, 8875, Question I), the general licensee's authority to use a particular storage cask design under an approved CoC terminates 20 years after the date that the general licensee first loads the particular cask with spent fuel, unless the cask's CoC is renewed. Because this rulemaking renews the certificates, and renewal is a separate NRC licensing action voluntarily implemented by vendors, the renewal of these CoCs is not an imposition of new or changed requirements from which these licensees would otherwise be protected by the backfitting provisions in 10 CFR 72.62 or 10 CFR 50.109.

Even if renewal of this CoC system could be considered a backfit, EnergySolutions, as the holder of the CoC and vendor of the casks, is not protected by the backfitting provisions in 10 CFR 72.62.

Unlike a vendor, general licensees using the existing systems subject to these renewals would be protected by the backfitting provisions in 10 CFR 72.62 and 10 CFR 50.109 if the renewals constituted new or changed requirements. But as previously explained, renewal of the certificates for these systems does not impose such requirements. The general licensees using these CoCs may continue storing material in their respective cask systems for the initial 20-year storage period identified in the applicable certificate or amendment with no changes. If general licensees choose to continue to store spent fuel in VSC-24 Cask Systems after the initial

20-year period, these general licensees will be required to implement AMPs for any cask systems subject to a renewed CoC, but such continued use is voluntary.

As part of the renewal application, EnergySolutions requested some changes to the originally-certified systems that go beyond the aging management provisions required by NRC regulations. Some of these changes impose additional design and operating conditions on the certificates and their corresponding TSs to preclude the use of specified cask components, and prohibit the future storage of spent fuel above a certain burnup limit. While the imposition of such conditions would be considered a backfit if the general licensees using VSC-24 Storage Cask Systems were using the prohibited components or storing spent fuel with the prohibited burnup, none of these licensees are doing so. These prohibitions were proposed by the certificate holder to avoid having to analyze aging effects that do not and will not apply to any VSC-24 Storage Cask Systems currently in service. The NRC staff confirmed that these proposed design and operating conditions do not affect any VSC-24 Storage Cask Systems currently in service (which are located at the Arkansas Nuclear One, the Point Beach, and the Palisades Nuclear Plant sites). Therefore, these additional conditions and TS changes do not constitute backfitting within the provisions of 10 CFR 72.62 or 10 CFR 50.109.

EnergySolutions also requested a condition that will prohibit the construction or placement into service of new VSC-24 SSCs under the renewed initial CoC No. 1007 certificate and Amendment Nos. 1–3, but this condition will not affect the users of existing casks. General licensees using VSC-24 Storage Cask Systems in service under the initial certificate or Amendment Nos. 1–3 as of the renewal's effective date may continue storing fuel and performing SSC maintenance and repairs in accordance with the conditions of their applicable CoC. Therefore, the requested condition affects only EnergySolutions, since it would be prohibited from manufacturing new systems under the initial certificate or Amendment Nos. 1–3 in the future. As previously mentioned, EnergySolutions, as the holder of the CoC, is not

protected from backfitting by 10 CFR 72.62, and in any case, EnergySolutions itself requested the NRC to impose the condition. The vendor did not submit its request in response to new NRC requirements, nor any NRC request for an application to amend this CoC.

For these reasons, renewing the initial certificate and Amendment Nos. 1–6 of CoC No. 1007, and imposing the additional conditions previously discussed, do not constitute backfitting under 10 CFR 72.62 or 10 CFR 50.109(a)(1), or otherwise represent an inconsistency with the issue finality provisions applicable to combined licenses in part 52. Accordingly, the NRC staff has not prepared a backfit analysis for this rulemaking.

XIII. Congressional Review Act

The OMB has not found this to be a major rule as defined in the Congressional Review Act.

XIV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

| Document | ADAMS Accession No. / <i>Federal Register</i> Citation |
|---|--|
| Proposed CoC No. 1007 Renewal, Initial Issuance | ML16057A127 |
| Proposed TS, Attachment A, CoC No. 1007 Renewal, Initial Issuance | ML16057A139 |
| Proposed CoC No. 1007 Renewal, Amendment 1 | ML16057A189 |
| Proposed TS, Attachment A, Amendment 1 | ML16057A211 |
| Proposed CoC No. 1007 Renewal, Amendment 2 | ML16057A216 |

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| Proposed TS, Attachment A, Amendment 2 | ML16057A322 |
| Proposed CoC No. 1007 Renewal, Amendment 3 | ML16057A333 |
| Proposed TS, Attachment A, Amendment 3 | ML16057A358 |
| Proposed CoC No. 1007 Renewal, Amendment 4 | ML16057A449 |
| Proposed TS, Attachment A, Amendment 4 | ML16057A511 |
| Proposed CoC No. 1007 Renewal, Amendment 5 | ML16057A593 |
| Proposed TS, Attachment A, Amendment 5 | ML16057A600 |
| Proposed CoC No. 1007 Renewal, Amendment 6 | ML16057A617 |
| Proposed TS, Attachment A, Amendment 6 | ML16057A630 |
| Preliminary SER | ML16057A667 |
| Final Safety Analysis Report for the VSC-24 Ventilated Storage Cask System | ML060810682 |
| NUREG-1092, "Environmental Assessment for 10 CFR Part 72 - Licensing Requirements for the Independent Storage of Spent Fuel and High-Level Radioactive Waste" | ML091050510 |
| Proposed Rule, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste" | 51 FR 19106 |
| Environmental Assessment and Finding of No Significant Impact for Proposed Rule Entitled "Storage of Spent Nuclear Fuel in NRC-Approved Storage Casks at Nuclear Power Reactor Sites" | 54 FR 19379 |
| Final Rule, "Storage of Spent Fuel In NRC-Approved Storage Casks at Power Reactor Sites" | 55 FR 29181 |
| Final Rule, "License and Certificate of Compliance Terms" | 76 FR 8872 |

The NRC may post materials related to this document, including public comments, on the Federal Rulemaking Web site at <http://www.regulations.gov> under Docket ID NRC-2016-0138. The Federal Rulemaking Web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (NRC-2016-0138); 2) click the "Sign up for E-mail Alerts" link; and 3) enter your e-mail address

and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

List of Subjects in 10 CFR Part 72

Administrative practice and procedure, Criminal penalties, Hazardous waste, Indians, Intergovernmental relations, Manpower training programs, Nuclear energy, Nuclear materials, Occupational safety and health, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistleblowing.

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: Atomic Energy Act of 1954, secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 223, 234, 274 (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2210e, 2232, 2233, 2234, 2236, 2237, 2238, 2273, 2282, 2021); Energy Reorganization Act of 1974, secs. 201, 202, 206, 211 (42 U.S.C. 5841, 5842, 5846, 5851); National Environmental Policy Act of 1969 (42 U.S.C. 4332); Nuclear Waste Policy Act of 1982, secs. 117(a), 132, 133, 134, 135, 137, 141, 145(g), 148, 218(a) (42 U.S.C. 10137(a), 10152, 10153, 10154, 10155, 10157, 10161, 10165(g), 10168, 10198(a)); 44 U.S.C. 3504 note.

2. In § 72.214, Certificate of Compliance 1007 is revised to read as follows:

§ 72.214 List of approved spent fuel storage casks.

* * * * *

Certificate Number: 1007.

Initial Certificate Effective Date: May 7, 1993, superseded by Renewed Initial Certificate, on September 20, 2017.

Renewed Initial Certificate Effective Date: September 20, 2017.

Amendment Number 1 Effective Date: May 30, 2000, superseded by Renewed Amendment Number 1, on September 20, 2017.

Renewed Amendment Number 1 Effective Date: September 20, 2017.

Amendment Number 2 Effective Date: September 5, 2000, superseded by Renewed Amendment Number 2, on September 20, 2017.

Renewed Amendment Number 2 Effective Date: September 20, 2017.

Amendment Number 3 Effective Date: May 21, 2001, superseded by Renewed Amendment Number 3, on September 20, 2017.

Renewed Amendment Number 3 Effective Date: September 20, 2017.

Amendment Number 4 Effective Date: February 3, 2003, superseded by Renewed Amendment Number 4, on September 20, 2017.

Renewed Amendment Number 4 Effective Date: September 20, 2017.

Amendment Number 5 Effective Date: September 13, 2005, superseded by Renewed Amendment Number 5, on September 20, 2017.

Renewed Amendment Number 5 Effective Date: September 20, 2017.

Amendment Number 6 Effective Date: June 5, 2006, superseded by Renewed Amendment Number 6, on September 20, 2017.

Renewed Amendment Number 6 Effective Date: September 20, 2017.

SAR Submitted by: EnergySolutions™ Corporation.

SAR Title: Final Safety Analysis Report for the VSC-24 Ventilated Storage Cask System.

Docket Number: 72-1007.

Renewed Certificate Expiration Date: May 7, 2053.

Model Number: VSC-24.

* * * * *

Dated at Rockville, Maryland, this 31st day of May, 2017.

For the Nuclear Regulatory Commission.

/RA/

Michael R. Johnson
Acting Executive Director
for Operations