

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

RIN 3150-AG19

List of Approved Spent Fuel Storage Casks; Revision, NUHOMS 24-P
and NUHOMS 52-B

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations containing the list of approved spent fuel storage cask designs by adding an amended version of Certificate of Compliance Number (CoC No.) 1004 to this list. The amended version reflects a change of ownership of this certificate from VECTRA Technologies, Inc. to Transnuclear West, Inc., (TN West) as well as an amendment to the certificate.

EFFECTIVE DATE: This final rule is effective on (30 days from the date of publication in the Federal Register).

FOR FURTHER INFORMATION CONTACT: Stan Turel, telephone (301) 415-6234, e-mail spt@nrc.gov of the Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

Background

Section 218(a) of the Nuclear Waste Policy Act of 1982, as amended (NWPA), requires that “[t]he Secretary [of Energy] shall establish a demonstration program, in cooperation with the private sector, for the dry storage of spent nuclear fuel at civilian nuclear reactor power 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, “[t]he Commission shall, by rule, establish procedures for the licensing of any technology approved by the Commission under Section 218(a) for use at the site of any civilian nuclear power reactor.”

To implement this mandate, the NRC approved dry storage of spent nuclear fuel in NRC-approved casks under a general license, publishing a final rule in 10 CFR Part 72 entitled “General License for Storage of Spent Fuel at Power Reactor Sites” (55 FR 29181; July 18, 1990). This rule also established a new Subpart L within 10 CFR Part 72 entitled “Approval of Spent Fuel Storage Casks,” containing procedures and criteria for obtaining NRC approval of dry storage cask designs.

Discussion

The NRC is revising information contained in § 72.214 under CoC No. 1004 to reflect Amendment No. 1 to CoC No. 1004 and to address four administrative issues in the current

language in § 72.214. These four administrative issues include (1) correcting the expiration date of CoC No. 1004 from the present "(20 years after the final rule effective date)" to "January 23, 2015;" (2) correcting the title and revision number of the standardized NUHOMS SAR to be consistent with the approach the NRC adopted for CoC SARs in a new § 72.248 (see final rule in 64 FR 53582; October 4, 1999); (3) revising the CoC to reflect the transfer of the CoC from VECTRA Technologies, Inc. to Transnuclear West, Inc., (TN West); and (4) specifying the applicability of Amendment No. 0 and Amendment No. 1 to this CoC.

Change 1 keeps the certificate expiration date consistent with the NRC's policy for Part 72 CoCs, which is to use 20 years from the date the final rule is effective. The final rule adding CoC No. 1004 to § 72.214 was effective on January 23, 1995; consequently, the expiration date for this CoC is January 23, 2015.

Change 2 keeps CoC No. 1004 consistent with other recent changes to 10 CFR 72.248. The SAR title will be changed from "Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel, Revision 2" to "Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel." In the new § 72.248, a final SAR is to be submitted to the Commission within 90 days after approval of the cask design and then will be updated periodically. Replacement pages will be provided to the Commission in accordance with § 72.248.

Change 3 recognizes the transfer of the CoC from VECTRA to TN West. NRC received letters dated December 18, 1997, from both VECTRA and TN West describing the purchase of VECTRA's intellectual properties and assets associated with NUHOMS technology by TN West. In its December 18, 1997, letter, TN West described that it planned to conduct fabrication activities in accordance with the quality assurance program described in Section 11 of the NUHOMS SAR. TN West further described that it had acquired the composite records of casks

manufactured under CoC No. 1004 and that it had records associated with changes to the NUHOMS design implemented after issuance of the CoC.

Change 4 describes how general licensees would continue to use spent fuel storage casks manufactured under the original CoC No. 1004, if the cask being used was fabricated before **[insert effective date of the final rule]**. After **[insert effective date of the final rule]**, casks must be manufactured in accordance with CoC No. 1004, Amendment No. 1. This final rule issues Amendment No. 1 to CoC No. 1004. Amendment No. 1 revises and reformats the CoC to be consistent with the NRC's current format and layout for Part 72 certificates. Proposed condition No. 4 in CoC No. 1004 is removed in response to comments as discussed below. Conditions No. 1 through 8 are renumbered.

Based on the October 1995 and January 1999 safety evaluations, the newly established fabrication inspection procedures, and the Amendment No. 1 to CoC No. 1004, the NRC staff has concluded that the NUHOMS-24P and -52B cask design, when used in accordance with the conditions specified in the CoC as amended, and NRC regulations, will meet the Part 72 requirements and thus ensure adequate protection of the public health and safety.

The Amendment No. 1 to CoC No. 1004, the VECTRA safety analyses, and the NRC staff safety evaluations are available for inspection at the NRC Public Document Room, 2120 L Street, NW (Lower Level), Washington, DC 20003-1527. Documents created or received at the NRC after November 1, 1999 are also available electronically at the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/NRC/ADAMS/index.html>. From this site, the public can gain entry into the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. For more information, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 202-634-3273 or by email to pdr@nrc.gov. Single copies of the Amendment No. 1 to

CoC No. 1004 may be obtained from Stan Turel, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6234, email spt@nrc.gov.

Public Comments on the Proposed Rule

Summary of Public Comments on proposed rule.

The NRC received two comment letters on the proposed rule. One comment was from a user of the NUHOMS spent fuel storage system and the other was from the vendor of the NUHOMS spent fuel storage system. Both commenters supported the overall approach taken in the proposed amendment. However, both commenters also disagreed with the proposed change to Condition No. 4 in the CoC and proposed alternate wording. Condition No. 4 was added, in part, in response to a February 5, 1997, NMSS Director's Decision, to ensure future compliance with § 72.150, with respect to dry shielded canister (DSC) shell-weld thickness, by requiring inspection of DSC shell welds. Both commenters believe that the concerns identified in the Director's Decision have been overtaken by other events, specifically the numerous corrective actions taken by Vectra and later by TN West — Vectra was subsequently acquired by TN West. These actions corrected the petitioner's and NRC's concerns regarding this issue.

At the time of the Director's Decision, Vectra had already begun an exhaustive review of its design, licensing, fabrication, and quality assurance program and implemented numerous improvements to its fabrication specifications, drawings, and procedures. The remaining concerns were addressed by TN West and resulted in NRC authorizing resumption of fabrication of NUHOMS components in 1998. Both commenters indicated that TN West has translated and implemented the proposed Condition No. 4 into the fabrication drawings and

specifications. Furthermore, these corrective actions provide adequate assurance that the NUHOMS storage system will perform its intended safety function. Therefore, including such detailed fabrication and inspection requirements in the CoC is redundant, inconsistent with the NRC's initiative in this rule to be uniform in the format and layout for Part 72 CoCs, and is unnecessary.

Response: The NRC agrees with the comments, in part. The 1997 Director's Decision established a process to provide other interested members of the public an opportunity to comment on any aspect of the NRC safety evaluation associated with this issue. One purpose of the rulemaking was to consider whether the wall thinning issue justified a unique fabrication inspection requirement in the CoC No. 1004. The Director's Decision was based, in part, on Vectra's performance history with this issue and concluded that changes to the CoC merited consideration. After the 1997 Director's Decision, requirements for wall thickness have been included and implemented in the NUHOMS storage system fabrication specifications, procedures, and inspection requirements. In the revised CoC, Condition No. 3 specifies that the system drawings for the NUHOMS are contained in Appendix E of the Safety Analysis Report. The NRC also notes that Vectra's performance history with this issue is no longer a relevant factor in establishing the CoC conditions, because VECTRA is no longer involved in the fabrication of the NUHOMS storage system.

Additionally, the NRC has recently published a separate final rule to expand the applicability of the quality assurance provisions of Part 72, Subpart G, to certificate holders and applicants for a CoC (64 FR 56114; October 15, 1999). Three of the sections in the revised Subpart G are relevant to this response (see §§ 72.146, "Design Control"; 72.150, "Instructions, Procedures, and Drawings"; and 72.160, "Licensee and Certificate Holder Inspection"). The revised § 72.146(a) states, in part:

The ... certificate holder ... shall establish measures to ensure that applicable regulatory requirements and the design basis, as specified in the ... CoC application for those structures, systems, and components to which this section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to ensure that appropriate quality standards are included in design documents

The revised § 72.150 states, in part:

The ... certificate holder ... shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed.

The revised § 72.160 states, in part:

The ... certificate holder ... shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity to verify conformance with documented instructions, procedures, and drawings for the accomplishment of the activity.

TN West's [VECTRA's] revision of the design drawings, instructions, and procedures to specify a weld thickness of greater than 0.500 inch and a weld inspection requirement and its responsibility as the certificate holder to comply with the new quality assurance requirements contained in §§ 72.146, 72.150, and 72.164, taken together, provide reasonable assurance that public health and safety will not be adversely affected by the continued manufacture and use of the NUHOMS storage system. Consequently, the NRC agrees with the commenters that the proposed Condition No. 4 is unnecessary and would be inconsistent with a purpose of the proposed rule related to the NRC's initiative to establish a standard format and content for all Part 72 CoCs. However, the NRC disagrees with the alternative solution proposed by the commenters to retain a modified version of Condition No. 4, because this action would not be

fully consistent with the intent of the commenter's standardization issue; nor would it be fully consistent with the NRC's initiative in the proposed rule to establish a standard format and content for Part 72 CoCs.

Therefore, inclusion of the proposed detailed fabrication requirements (i.e., proposed Condition No. 4) in CoC No. 1004 is unnecessary and is removed in this final rule. All other changes to the CoC stand as proposed. The NRC considers that this action is consistent with the actions delineated in the February 5, 1997, Director's Decision and the subsequent rulemaking to expand the applicability of the Part 72 quality assurance regulations in Subpart G to certificate holders.

Summary of Final Revisions

The NRC staff modified the listing for the Transnuclear West, Inc. NUHOMS 24-P and NUHOMS 52-B cask system within 10 CFR 72.214, "List of approved spent fuel storage casks," with respect to the expiration date of CoC, the title and revision number of the standardized NUHOMS SAR, and the applicability of Amendment No. 0 and Amendment No.1 to the CoC. The NRC staff also revised the CoC.

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 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 (AEA), or the provisions of Title 10 of the Code of Federal Regulations. 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.

Finding of No Significant Environmental Impact: Availability

Under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, the NRC has determined that this rule is not a major Federal action significantly affecting the quality of the human environment and therefore, an environmental impact statement is not required. This final rule adds an amended version of Certificate of Compliance Number (CoC No.) 1004 to the list of approved spent fuel storage casks that power-reactor licensees can use to store spent fuel at reactor sites without additional site-specific approvals from the Commission. The environmental assessment and finding of no significant impact on which this determination is based are available for inspection at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and finding of no significant impact are available from Stan Turel, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-6234, e-mail spt@nrc.gov.

Paperwork Reduction Act Statement

This final rule does not contain a new or amended information collection requirement

subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget, approval number 3150-0132.

Public Protection Notification

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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 the use of such a standard is inconsistent with applicable law or otherwise impractical. In this final rule, the NRC is adding an amended version of CoC No. 1004 to the list of approved spent fuel storage casks that power-reactor licensees can use to store spent fuel at reactor sites without additional site-specific approvals from the Commission. This action does not constitute the establishment of a standard that establishes generally-applicable requirements.

Regulatory Analysis

On July 18, 1990 (55 FR 29181), the Commission issued an amendment to 10 CFR

Part 72. The amendment provided for the storage of spent nuclear fuel in cask systems with designs approved by the NRC under a general license. Any nuclear power reactor licensee can use cask systems with designs approved by the NRC to store spent nuclear fuel if it 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. In that rule, four spent fuel storage casks were approved for use at reactor sites and were listed in 10 CFR 72.214. That rule envisioned that storage casks certified in the future could be routinely added to the listing in 10 CFR 72.214 through the rulemaking process. Procedures and criteria for obtaining NRC approval of new spent fuel storage cask designs were provided in 10 CFR Part 72, Subpart L.

The alternative to this action is to withhold approval of this new design and issue a site-specific license to each utility that proposes to use the casks. This alternative would cost both the NRC and utilities more time and money for each site-specific license. Conducting site-specific reviews would ignore the procedures and criteria currently in place for the addition of new cask designs that can be used under a general license, and would be in conflict with NWPAs direction to the Commission to approve technologies for the use of spent fuel storage at the sites of civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site reviews. This alternative also would tend to exclude new vendors from the business market without cause and would arbitrarily limit the choice of cask designs available to power reactor licensees. This final rule will eliminate the above problems and is consistent with previous Commission actions. Further, the rule will have no adverse effect on public health and safety.

The benefit of this rule to nuclear power reactor licensees is to make available a greater choice of spent fuel storage cask designs that can be used under a general license. The new cask vendors with casks to be listed in 10 CFR 72.214 benefit by having to obtain NRC

certificates only once for a design that can then be used by more than one power reactor licensee. The NRC also benefits because it will need to certify a cask design only once for use by multiple licensees. Casks approved through rulemaking are to be suitable for use under a range of environmental conditions sufficiently broad to encompass multiple nuclear power plants in the United States without the need for further site-specific approval by NRC. Vendors with cask designs already listed may be adversely impacted because power reactor licensees may choose a newly listed design over an existing one. However, the NRC is required by its regulations and NWPAs to certify and list approved casks. This rule has no significant identifiable impact or benefit on other Government agencies.

Based on the above discussion of the benefits and impacts of the alternatives, the NRC concludes that the requirements of the final rule are commensurate with the Commission's responsibilities for public health and safety and the common defense and security. No other available alternative is believed to be as satisfactory, and thus, this action is recommended.

Small Business Regulatory Enforcement Fairness Act

In accordance with the Small Business Regulatory Enforcement Fairness 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, Office of Management and Budget.

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. This rule affects only the licensing and operation of

nuclear power plants, independent spent fuel storage facilities, and Transnuclear West, Inc. The 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 Small Business Size Standards set out in regulations issued by the Small Business Administration at 13 CFR Part 121.

Backfit Analysis

The NRC has determined that the backfit rule (10 CFR 50.109 or 10 CFR 72.62) does not apply to this rule because this amendment does not involve any provisions that would impose backfits as defined in the backfit rule. Therefore, a backfit analysis is not required.

List of Subjects in 10 CFR Part 72

Criminal penalties, Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

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; and 5 U.S.C. 553; the NRC is proposing to adopt the following amendments to 10 CFR part 72.

PART 72--LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE 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. 10d - 48b, sec. 7902, 10b Stat. 31b3 (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).

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, 2244, (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 Section 72.214, Certificate of Compliance 1004 is added to read as follows:

§ 72.214 List of approved spent fuel storage casks.

* * * * *

Certificate Number: 1004

Amendment Number: 0 and 1

Amendment Applicability:

Amendment No. 0 is applicable for casks manufactured before [insert effective date of final rule].

Amendment No. 1 is applicable for casks manufactured after [insert effective date of final rule].

SAR Submitted by: Transnuclear West, Inc.

SAR Title: Final Safety Analysis Report for the Standardized NUHOMS

Horizontal Modular Storage System for Irradiated Nuclear Fuel

Docket Number: 72-1004

Certificate Expiration Date: January 23, 2015

Model Numbers: Standardized NUHOMS-24P and NUHOMS-52B

* * * * *

Dated at Rockville, Maryland, this 13th day of March, 2000.

For the Nuclear Regulatory Commission.

/RA/

William D. Travers,
Executive Director for Operations.

Amendment Number: 0 and 1

Amendment Applicability:

Amendment No. 0 is applicable for casks manufactured before [insert effective date of final rule].

Amendment No. 1 is applicable for casks manufactured after [insert effective date of final rule].

SAR Submitted by: Transnuclear West, Inc.

SAR Title: Final Safety Analysis Report for the Standardized NUHOMS

Horizontal Modular Storage System for Irradiated Nuclear Fuel

Docket Number: 72-1004

Certificate Expiration Date: January 23, 2015

Model Numbers: Standardized NUHOMS-24P and NUHOMS-52B

* * * * *

Dated at Rockville, Maryland, this 13th day of March, 2000.

For the Nuclear Regulatory Commission.

/RA/

William D. Travers,
Executive Director for Operations.

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