

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

RIN [3150-AG57]

List of Approved Spent Fuel Storage Casks: NAC-UMS Revision

AGENCY: Nuclear Regulatory Commission.

ACTION: Direct final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations revising the NAC International (NAC) Universal Storage System (NAC-UMS) listing within the “List of approved spent fuel storage casks” to include Amendment No. 1 to the Certificate of Compliance (CoC). This amendment will allow holders of power reactor operating licenses as general licensees to store PWR design basis fuel assemblies in accordance with revised technical specifications and Maine Yankee site-specific spent fuel in the NAC-UMS. The changes proposed for Amendment No. 1 to the NAC-UMS CoC include: changes to authorized contents to allow Maine Yankee site-specific spent fuels within the PWR basket, including damaged or consolidated fuel in a Maine Yankee fuel can and burnups up to 50,000 MWd/MTU; changes to allow longer times for PWR spent fuel cask loading operations based on reduced heat loads; authorization to store, without canning, intact PWR assemblies with missing grid spacers (up to an unsupported length of 60 inches); editorial clarifications to the technical specifications (TS); and deletion of a certificate reference to the NS-4-FR trade name of the solid neutron shielding material in the VCC shield plug.

DATES: The final rule is effective February 20, 2001, unless significant adverse comments are received by January 8, 2001. If the rule is withdrawn, timely notice will be published in the Federal Register.

ADDRESSES: Submit comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Rulemakings and Adjudications Staff. Deliver comments to 11555 Rockville Pike, Rockville, MD, between 7:30 am and 4:15 pm on Federal workdays.

All publicly available documents related to this rulemaking, as well as all public comments received on this rulemaking, may be viewed and downloaded electronically via the NRC's rulemaking website at <http://ruleforum.llnl.gov>. You may also provide comments via this website by uploading comments as files (any format) if your web browser supports that function. For information about the interactive rulemaking site, contact Ms. Carol Gallagher (301) 415-5905; e-mail CAG@nrc.gov.

Certain documents related to this rule, including comments received by the NRC, may also be examined at the NRC Public Document Room, 11555 Rockville Pike, Rockville, MD. For more information, contact the NRC's Public Document Room Reference staff at 1-800-397-4209, (301) 415-4737 or by e-mail to pdr@nrc.gov.

Documents created or received at the NRC after November 1, 1999 are also available electronically at the NRC 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 Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents. An electronic copy of the proposed CoC and preliminary safety evaluation report (SER) can be found under ADAMS Accession No. ML003754655.

FOR FURTHER INFORMATION CONTACT: Keith McDaniel, telephone (301) 415-5252, e-mail, KKM@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 the Department of Energy (DOE)] 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 "[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 by 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 spent fuel storage cask designs. The NRC subsequently issued a final rule on October 19, 2000 (65 FR 62581) that approved the NAC-UMS cask design and added it to the list of NRC-approved cask designs in § 72.214 as Certificate of Compliance Number (1015).

Discussion

On July 16, 1999, the certificate holder (NAC) submitted an application to the NRC to amend CoC No. 1015 to allow holders of power reactor operating licenses to store spent fuel in the cask under revised conditions. Amendment No. 1 includes: (1) changes to authorized contents to allow Maine Yankee site-specific spent fuels within the PWR basket, including damaged or consolidated fuel in a Maine Yankee fuel can and burnups up to 50,000 MWd/MTU; (2) changes to allow longer times for PWR spent fuel cask loading operations based on reduced heat loads; (3) authorization to store, without canning, intact PWR assemblies with missing grid spacers (up to an unsupported length of 60 inches); (4) editorial clarifications to the technical specifications; and (5) deletion of a certificate reference to the NS-4-FR trade name of the solid neutron shielding material in the VCC shield plug. No other changes to the NAC-UMS cask system design were requested in this application. The NRC staff performed a detailed safety evaluation of the proposed CoC amendment request which is summarized in the paragraph below.

The NAC-UMS cask was evaluated against the regulatory standards in 10 CFR Part 72. NAC demonstrated the structural adequacy of the Maine Yankee site-specific fuels (MYSSF) that are intact (with and without damaged assembly hardware), consolidated, damaged, and high-burnup. The thermal evaluation verified that the cladding (including high-burnup) and cask component temperatures were acceptable for all authorized spent fuel contents and configurations under normal, off-normal and accident conditions. The shielding evaluation determined that the site-specific spent fuels and various configurations, including fuel assembly hardware, are either bounded by the design basis fuel or were acceptable for meeting the applicable regulatory requirements. The criticality evaluation demonstrated that, for all

proposed MYSSF configurations, the criticality requirements of 10 CFR Part 72 are met. The original NAC-UMS confinement evaluation remains valid since the design is “leak-tight.” The TS were revised and identify the necessary specifications to provide reasonable assurance that the NAC-UMS cask will allow safe storage of all authorized contents.

The staff found that the changes stated above do not reduce the safety margin. In addition, the NRC staff has determined that changes do not pose any increased risk to public health and safety. A full discussion of the staff’s evaluation is set out in its SER which can be found under ADAMS Accession No. ML003754655.

This direct final rule revises the NAC-UMS cask design listing in § 72.214 by adding Amendment No. 1 to CoC No. 1015. The amendment consists of changes to the TS identified in the NRC staff’s SER for Amendment No. 1.

The amended NAC-UMS cask system, when used under the conditions specified in the CoC, the TSs, and NRC regulations, will meet the requirements of Part 72; thus, adequate protection of public health and safety will continue to be ensured.

CoC No. 1015, the revised Technical Specifications, and the underlying SER for Amendment No. 1, and the Environmental Assessment are available for inspection at the NRC Public Document Room, 11555 Rockville Pike, Rockville, MD. Single copies of the CoC may be obtained from Keith McDaniel, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-5252, email KKM@nrc.gov.

Discussion of Amendments by Section

§ 72.214 List of approved spent fuel storage casks.

Certificate No. 1015 is revised by adding the effective date of the initial certificate and the effective date of Amendment Number 1.

Procedural Background

This rule is limited to the changes contained in Amendment No. 1 to CoC No. 1015 and does not include other aspects of the NAC-UMS cask system design. The NRC is using the “direct final rule procedure” to promulgate this amendment because it represents 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 amendment is not considered to be a significant amendment by the NRC staff. The amendment to the rules will become effective on February 20, 2001. However, if the NRC receives significant adverse comments by January 8, 2001, then the NRC will publish a document that withdraws this action and will address the comments received in response to the proposed amendment published elsewhere in this issue of the Federal Register. These comments will be addressed in a subsequent final rule. The NRC will not initiate a second comment period on this action.

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 by a mechanism that is consistent with the particular State’s administrative procedure laws, but does not confer regulatory authority on the State.

Plain Language

The Presidential Memorandum dated June 1, 1998, entitled “Plain Language in Government Writing,” directed that the Federal Government’s writing be in plain language. The NRC requests comments on this direct final rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed under the heading “ADDRESSES” above.

Finding of No Significant Environmental Impact: Availability

Under the National Environmental Policy Act of 1969, as amended, and the NRC

regulations in Subpart A of 10 CFR Part 51, the NRC has determined that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required. The rule will amend the CoC for the NAC-UMS cask system within the list of approved spent fuel storage casks that power reactor licensees can use to store spent fuel at reactor sites under a general license. Amendment No. 1 includes: (1) changes to authorized contents to allow Maine Yankee site-specific spent fuels within the PWR basket, including damaged or consolidated fuel in a Maine Yankee fuel can and burnups up to 50,000 MWd/MTU; (2) changes to allow longer times for PWR spent fuel cask loading operations based on reduced heat loads; (3) authorization to store, without canning, intact PWR assemblies with missing grid spacers (up to an unsupported length of 60 inches); (4) editorial clarifications to the technical specifications; and (5) deletion of a certificate reference to the NS-4-FR trade name of the solid neutron shielding material in the VCC shield plug. 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, 11555 Rockville Pike, Rockville, MD. Electronic copies of the environmental assessment and finding of no significant impact can be found in the NRC's Public Electronic Reading Room on the Internet at <http://www.nrc.gov/NRC/ADAMS/index.html>. Single copies are available from Keith McDaniel, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-5252, email KKM@nrc.gov.

Paperwork Reduction Act Statement

This direct 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 direct final rule, the NRC will revise the NAC-UMS cask system design list in § 72.214 (List of NRC-approved spent fuel storage cask designs). 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 NRC issued an amendment to 10 CFR Part 72 to provide for the storage of spent nuclear fuel under a general license in cask system designs approved by the NRC. Any nuclear power reactor licensee can use NRC-approved cask designs to store spent nuclear fuel if it notifies the NRC in advance, 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 § 72.214. On October 19, 2000, (65 FR 62581), the NRC issued an amendment to Part 72 that approved the NAC-UMS design by adding it to the list of NRC-approved cask designs in § 72.214. On July 16, 1999, the certificate holder (NAC), submitted an application to the NRC to amend CoC No. 1015. Amendment No. 1 includes: (1) changes to authorized contents to allow Maine Yankee site-specific spent fuels within the PWR basket, including damaged or consolidated fuel in a Maine Yankee fuel can and burnups up to 50,000 MWd/MTU; (2) changes to allow longer times for PWR spent fuel cask loading operations based on reduced heat loads; (3) authorization to store, without canning, intact PWR assemblies with missing grid spacers (up to an unsupported length of 60 inches); (4) editorial clarifications to the technical specifications; and (5) deletion of a certificate reference to the NS-4-FR trade name of the solid neutron shielding material in the VCC shield plug.

The alternative to this action is to withhold approval of this amended cask system design and issue an exemption to each general license. This alternative would cost both the NRC and the utilities more time and money because each utility would have to pursue an exemption.

Approval of the direct final rule will eliminate the problems described above and is consistent with previous Commission actions. Further, the direct final rule will have no adverse effect on public health and safety. This direct final 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 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 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 NRC certifies that this rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. This direct final rule affects only the operation of nuclear power plants, independent spent fuel storage facilities, and NAC. 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 direct final rule because this amendment does not involve any provisions that would impose backfits as defined. 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 adopting 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 § 72.214, Certificate of Compliance (CoC) 1015 is revised to read as follows:

§ 72.214 List of approved spent fuel storage casks.

* * * * *

Certificate Number: 1015

Initial Certificate Effective Date: November 20, 2000

Amendment No. 1 Effective Date: February 20, 2001

SAR Submitted by: NAC International, Inc.

SAR Title: Final Safety Analysis Report for the NAC-UMS Universal Storage System

Docket Number: 72-1015

Certificate Expiration Date: November 20, 2020

Model Number: NAC-UMS

* * * * *

Dated at Rockville, Maryland, this 22nd day of Nov., 2000.

For the Nuclear Regulatory Commission.

/RA/

William D. Travers,
Executive Director for Operations.

Docket Number: 72-1015

Certificate Expiration Date: November 20, 2020

Model Number: NAC-UMS

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Dated at Rockville, Maryland, this 22nd day of Nov., 2000.

For the Nuclear Regulatory Commission.

/RA/

William D. Travers,
Executive Director for Operations.

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