

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

RIN 3150-

List of Approved Spent Fuel Storage Casks: FuelSolutions™ Cask System Revision 4

AGENCY: Nuclear Regulatory Commission.

ACTION: Direct final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations revising the BNG Fuel Solutions Corporation (FuelSolutions™) cask system listing within the “List of approved spent fuel storage casks” to include Amendment No. 4 to Certificate of Compliance Number 1026. Amendment No. 4 will change Technical Specification (TS) requirements related to periodic monitoring during storage operations. Specifically, the amendment will revise TS to permit longer surveillance intervals for casks with heat loads lower than the design basis heat load and permit visual inspection of the cask vent screens or measurement of the cask liner temperature to satisfy the periodic monitoring requirements that govern general design criteria for spent fuel storage casks. TS 3.3.1 will be deleted to remove daily monitoring requirements. TS 3.3.2 will be revised for the W21 and W74 canisters to permit either visual inspection of vent screens or liner thermocouple temperature monitoring. Also, TS 5.3.8 will add a section for the Periodic Monitoring Program which establishes intervals for periodic monitoring that are less than the time required to reach the limiting short-term temperature limit. This program will establish administrative controls and procedures to assure that the licensee will be able to determine when corrective action is required. In addition, the amendment will update editorial

changes associated with the company name change from BNFL Fuel Solutions Corporation to BNG Fuel Solutions Corporation and make other administrative changes.

**DATES:** The final rule is effective (**insert date 75 days after publication in the Federal Register**), unless significant adverse comments are received by (**insert date 30 days after publication in the Federal Register**). 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. If the rule is withdrawn, timely notice will be published in the Federal Register.

**ADDRESSES:** You may submit comments by any one of the following methods. Please include the following number (RIN 3150-XXXX) in the subject line of your comments. Comments on rulemakings submitted in writing or in electronic form will be made available for public inspection. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including personal information such as social security numbers and birth dates in your submission.

Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

E-mail comments to: [SECY@nrc.gov](mailto:SECY@nrc.gov). If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at (301) 415-1966. You may also submit comments via the NRC's rulemaking website at <http://ruleforum.llnl.gov>. Address questions about our rulemaking website to Carol Gallagher (301) 415-5905; e-mail [cag@nrc.gov](mailto:cag@nrc.gov). Comments can also be submitted via the Federal eRulemaking Portal <http://www.regulations.gov>.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 am and 4:15 pm Federal workdays [telephone (301) 415-1966].

Fax comments to: Secretary, U.S. Nuclear Regulatory Commission at (301) 415-1101.

Publicly available documents related to this rulemaking may be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. Selected documents, including comments, can be viewed and downloaded electronically via the NRC rulemaking website at <http://ruleforum.inl.gov>.

Publicly available documents created or received at the NRC after November 1, 1999, are available electronically at the NRC's Electronic Reading Room 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. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC PDR Reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov). An electronic copy of the proposed Certificate of Compliance (CoC), TS, and preliminary safety evaluation report (SER) can be found under ADAMS Accession Nos. ML053420606 (CoC), ML053420632 (TS-W100/W150), ML053420626 (TS-W21), ML053420617 (TS-W74), and ML053420638 (SER).

CoC No. 1026, the revised TS, the underlying SER for Amendment No. 4, and the Environmental Assessment (EA), are available for inspection at the NRC PDR, 11555 Rockville Pike, Rockville, MD. Single copies of these documents may be obtained from Jayne M. McCausland, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6219, e-mail [jmm2@nrc.gov](mailto:jmm2@nrc.gov).

FOR FURTHER INFORMATION CONTACT: Jayne M. McCausland, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6219, e-mail [jmm2@nrc.gov](mailto:jmm2@nrc.gov).

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

January 16, 2001 (66 FR 3444) that approved the FuelSolutions™ cask system design and added it to the list of NRC-approved cask designs in 10 CFR 72.214 as CoC No. 1026.

## Discussion

On June 30, 2005, the certificate holder, BNG Fuel Solutions Corporation, submitted an application to the NRC to amend CoC No. 1026 to modify the TS requirements related to periodic monitoring during storage operations. Specifically, the application requested TS changes to permit longer surveillance intervals for casks with heat loads lower than the design basis heat load and permit visual inspection of the cask vent screens or measurement of the cask liner temperature to satisfy the periodic monitoring requirements of 10 CFR 72.122(h)(4). TS 3.3.1 will be deleted to remove daily monitoring requirements. TS 3.3.2 will be revised for the W21 and W74 canisters to permit either visual inspection of vent screens or liner thermocouple temperature monitoring. Also, TS 5.3.8 will add a section for the Periodic Monitoring Program which establishes intervals for periodic monitoring that are less than the time required to reach the limiting short-term temperature limit. This program will establish administrative controls and procedures to assure that the licensee will be able to determine when corrective action is required. In addition, the amendment will update editorial changes associated with the company name change from BNFL Fuel Solutions Corporation to BNG Fuel Solutions Corporation and make other administrative changes. No other changes to the FuelSolutions™ cask system were requested in this application. The NRC staff performed a detailed safety evaluation of the proposed CoC amendment request and found that an acceptable safety margin is maintained. In addition, the NRC staff has determined that there

continues to be reasonable assurance that public health and safety and the environment will be adequately protected.

This direct final rule revises the FuelSolutions™ cask system listing in 10 CFR 72.214 by adding Amendment No. 4 to CoC No. 1026. The amendment consists of changes to the requirements to permit longer surveillance intervals for casks with heat loads lower than the design basis heat load and permit visual inspection of the cask vent screens or measurement of the cask liner temperature to satisfy the periodic monitoring requirements of 10 CFR 72.122(h)(4). The particular TS which are changed are identified in the NRC staff's SER for Amendment No. 4.

The amended FuelSolutions™ cask system, when used in accordance with the conditions specified in the CoC, the TS, and NRC regulations, will meet the requirements of Part 72; thus, adequate protection of public health and safety will continue to be ensured.

#### Discussion of Amendments by Section

§ 72.214 List of approved spent fuel storage casks.

Certificate No. 1026 is revised by adding the effective date of Amendment Number 4.

#### Procedural Background

This rule is limited to the changes contained in Amendment No. 4 to CoC No. 1026 and does not include other aspects of the FuelSolutions™ cask system. The NRC is using the “direct final rule procedure” to issue 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. The amendment to the rule will become effective on **(insert 75 days after publication in the Federal Register)**. However, if the NRC receives significant adverse comments by **(insert 30 days after publication in the Federal Register)**, then the NRC will publish a document that withdraws this action and will address the comments received in response to the proposed amendments, published elsewhere in this issue of the Federal Register, in a subsequent final rule. 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, in a substantive response:

(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 CoC or TS.

### 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 FuelSolutions™ cask system design listed 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.

### 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.

### Plain Language

The Presidential Memorandum dated June 1, 1998, entitled "Plain Language in Government Writing," directed that the 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, will 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 FuelSolutions™ 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. 4 will modify the present cask system design to revise the TS requirements related to periodic monitoring during storage operations. Specifically, the amendment will revise TS to permit longer surveillance intervals for casks with heat loads lower than the design basis heat load and permit visual inspection of the cask vent screens or measurement of the cask liner temperature to satisfy the periodic monitoring requirements of

10 CFR 72.122(h)(4). TS 3.3.1 will be deleted to remove daily monitoring requirements. TS 3.3.2 will be revised for the W21 and W74 canisters to permit either visual inspection of vent screens or liner thermocouple temperature monitoring. Also, TS 5.3.8 will add a section for the Periodic Monitoring Program which establishes intervals for periodic monitoring that are less than the time required to reach the limiting short-term temperature limit. This program will establish administrative controls and procedures to assure that the licensee will be able to determine when corrective action is required. In addition, the amendment will update editorial changes associated with the company name change from BNFL Fuel Solutions Corporation to BNG Fuel Solutions Corporation and make other administrative changes.

The EA 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. Single copies of the EA and finding of no significant impact are available from Jayne M. McCausland, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6219, e-mail [jmm2@nrc.gov](mailto:jmm2@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

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

## 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. 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 10 CFR 72.214. On January 16, 2001 (66 FR 3444), the NRC issued an amendment to Part 72 that approved the FuelSolutions™ cask design by adding it to the list of NRC-approved cask designs in 10 CFR 72.214. On June 30, 2005, the certificate holder, BNG Fuel Solutions Corporation, submitted an application to the NRC to amend CoC No. 1026 to modify the TS requirements related to periodic monitoring during storage operations. Specifically, the amendment will revise the TS to permit longer surveillance intervals for casks with heat loads lower than the design basis heat load and permit visual inspection of the cask vent screens or measurement of the cask liner temperature to satisfy the periodic monitoring requirements of 10 CFR 72.122(h)(4). TS 3.3.1 will be deleted to remove daily monitoring requirements. TS 3.3.2 will be revised for the W21 and W74 canisters to permit either visual inspection of vent screens or liner thermocouple temperature monitoring.

Also, TS 5.3.8 will add a section for the Periodic Monitoring Program which establishes intervals for periodic monitoring that are less than the time required to reach the limiting short-term temperature limit. This program will establish administrative controls and procedures to assure that the licensee will be able to determine when corrective action is required. In addition, the amendment will update editorial changes associated with the company name change from BNFL Fuel Solutions Corporation to BNG Fuel Solutions Corporation and make other administrative changes. 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 this problem and is consistent with previous NRC 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 this 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.

#### 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 issued, have a significant economic impact on a substantial number of small entities. This direct final rule affects only the licensing and operation of nuclear

power plants, independent spent fuel storage facilities, and BNG Fuel Solutions Corporation. 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.

#### Congressional Review Act

In accordance with the Congressional Review 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.

#### List of Subjects In 10 CFR Part 72

Administrative practice and procedure, Criminal penalties, Manpower training programs, 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; 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:** 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. 102-486, sec. 7902, 106 Stat. 3123 (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); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. 109-58, 119 Stat. 806-810 (42 U.S.C. 2014, 2021, 2021b, 2111).

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, 2224 (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 1026 continues to read as follows:

**§ 72.214 List of approved spent fuel storage casks.**

\* \* \* \* \*

Certificate Number: 1026.

Initial Certificate Effective Date: February 15, 2001.

Amendment Number 1 Effective Date: May 14, 2001.

Amendment Number 2 Effective Date: January 28, 2002.

Amendment Number 3 Effective Date: May 7, 2003.

Amendment Number 4 Effective Date: **(insert date 75 days after publication in the Federal Register).**

SAR Submitted by: BNG Fuel Solutions Corporation.

SAR Title: Final Safety Analysis Report for the FuelSolutions™ Spent Fuel Management System.

Docket Number: 72-1026.

Certificate Expiration Date: February 15, 2021.

Model Number: WSNF-220, WSNF-221, and WSNF-223 systems; W-150 storage cask;  
W-100 transfer cask; and the W-21 and W-74 canisters.

\* \* \* \* \*

Dated at Rockville, Maryland, this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

For the Nuclear Regulatory Commission.

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Luis A. Reyes,  
Executive Director for Operations.

Model Number: WSNF-220, WSNF-221, and WSNF-223 systems; W-150 storage cask;  
W-100 transfer cask; and the W-21 and W-74 canisters.

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Dated at Rockville, Maryland, this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

For the Nuclear Regulatory Commission.

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Luis A. Reyes,  
Executive Director for Operations.

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