The proposed action does not result in changes to land use or water use, or result in changes to the quality or quantity of non-radiological effluents. No changes to the National Pollution Discharge Elimination System permit are needed. No effects on the aquatic or terrestrial habitat in the vicinity of the plant, or to threatened, endangered, or protected species under the Endangered Species Act, or impacts to essential fish habitat covered by the Magnuson-Steven's Act are expected. There are no impacts to the air or ambient air quality. There are no impacts to historical and cultural resources. There would be no impact to socioeconomic resources. Therefore, no changes to or different types of non-radiological environmental impacts are expected as a result of the proposed exemption.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action. In addition, in promulgating its revisions to 10 CFR part 73, the Commission prepared an environmental assessment and published a finding of no significant impact [part 73, Power Reactor Security Requirements, 74 FR 13926, 13967 (March 27, 2009)].

With its request to extend the implementation deadline, the licensee has proposed compensatory measures to be taken in lieu of full compliance with the new requirements specified in 10 CFR part 73. The licensee currently maintains a security system acceptable to the NRC and the proposed compensatory measures will continue to provide acceptable physical protection of the Vermont Yankee in lieu of the new requirements in 10 CFR part 73. Therefore, the extension of the implementation date of the new requirements of 10 CFR part 73 to September 20, 2010, would not have any significant environmental impacts.

The NRC staff 's safety evaluation will be provided in the exemption that will be issued as part of the letter to the licensee approving the exemption to the regulation, if granted.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered denial of the proposed action (*i.e.,* the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. If the proposed action was denied, the licensee would have to comply with the March 31, 2010, implementation deadline. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for Vermont Yankee Nuclear Power Station, Docket No. 50–271, dated July 1972, as supplemented through the "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Vermont Yankee Nuclear Power Station," published in August 2007. Final Report (NUREG—1437, Supplement 30)."

Agencies and Persons Consulted

In accordance with its stated policy, on February 24, 2010, the NRC staff consulted with the Vermont State official of the Vermont Department of Public Service regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated January 21, 2010, as supplemented by letter dated February 17, 2010. Portions of the submittal dated January 21, 2010, as supplemented by letter dated February 17, 2010, contain security related sensitive information and, accordingly, are withheld from public disclosure in accordance with 10 CFR 2.390. Publicly available versions of this document are accessible electronically from the Agencywide Documents Access and Management System (ADAMS) with Accession Nos. ML100270294 and ML100100541743, respectively.

Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the ADAMS Public Electronic Reading Room on the Internet at the NRC Web site, *http://www.nrc.gov/reading-rm/adams.html.* Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1–800–397–4209 or 301–415–4737, or send an e-mail to *pdr@nrc.gov.*

Dated at Rockville, Maryland, this 8th the day of March 2010.

For the Nuclear Regulatory Commission.

James Kim,

Project Manager, Plant Licensing Branch I–1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

[FR Doc. 2010–5562 Filed 3–12–10; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

[Docket No 50–395; NRC–2010–0077]

South Carolina Electric and Gas Company; Virgil C. Summer Nuclear Station, Unit 1; Exemption

1.0 Background

The South Carolina Electric and Gas Company (SCE&G, the licensee) is the holder of Facility Operating License No. NPF–12 which authorizes operation of the Virgil C. Summer Nuclear Station, Unit 1 (VCSNS). The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of a pressurized-water reactor located in Fairfield County in South Carolina.

2.0 Request/Action

Title 10 of the Code of Federal Regulations (10 CFR) Section 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," requires, among other items, that:

> Each boiling or pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy or ZIRLO cladding must be provided with an emergency core cooling system (ECCS) that must be designed so that its calculated cooling performance following postulated loss-of-coolant accidents [LOCAs] conforms to the criteria set forth in paragraph (b) of this section.

Appendix K to 10 CFR part 50, "ECCS Evaluation Models," requires, among other items, that the rate of energy release, hydrogen generation, and cladding oxidation from the metal/water reaction shall be calculated using the Baker-Just equation. The regulations of 10 CFR 50.46 and 10 CFR part 50, Appendix K, make no provision for use of fuel rods clad in a material other than zircaloy or ZIRLO™. Since the chemical composition of the Optimized ZIRLO™ alloy differs from the specifications for zircaloy or ZIRLO™, a plant-specific exemption is required to allow the use of the Optimized ZIRLO™ alloy as a cladding material at VCSNS. Therefore,

by letter dated June 9, 2009, the licensee requested an exemption that would allow the use of Optimized ZIRLO™ fuel rod cladding at VCSNS.

3.0 Discussion

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health and safety, and are consistent with the common defense and security; and (2) when special circumstances are present.

Authorized by Law

This exemption results in allowing the use of Optimized ZIRLO™ fuel rod cladding material at the VCSNS. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50. The NRC staff has determined that granting of the licensee's proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations. Therefore, the exemption is authorized by law.

No Undue Risk to Public Health and Safety

The underlying purpose of 10 CFR 50.46 is to establish acceptance criteria for adequate ECCS performance. By letter dated June 10, 2005, the NRC staff issued a safety evaluation (Addendum 1 SE) approving Addendum 1 to Westinghouse Topical Report WCAP–12610–P–A and CENPD–404–P–A, "Optimized ZIRLO™" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML051670408), wherein the NRC staff approved the use of Optimized ZIRLO™ as a fuel cladding material. The NRC staff approved the use of Optimized ZIRLO™ as a fuel cladding material based on: (1) Similarities with standard ZIRLO™, (2) demonstrated material performance, and (3) a commitment to provide irradiated data and validate fuel performance models ahead of burnups achieved in batch application. The NRC staff's safety evaluation for Optimized ZIRLO™ includes 10 conditions and limitations for its use.

As previously documented in that safety evaluation, and subject to compliance with the specific conditions of approval established therein, the NRC staff finds that the applicability of the ECCS acceptance criteria to Optimized ZIRLO™ has been demonstrated by Westinghouse. Ring compression tests performed by Westinghouse on Optimized ZIRLO™ (documented in Appendix B of Addendum1–A to WCAP–12610–P–A and CENPD–404–P–A, "Optimized ZIRLO™," July 2006, ADAMS Accession No. ML062080576) demonstrate an acceptable retention of post-quench ductility up to 10 CFR 50.46 limits of 2200 degrees Fahrenheit (°F) and 17 percent equivalent clad reacted (ECR). Furthermore, the NRC staff concludes that oxidation measurements provided by Westinghouse in a letter to the NRC, "SER [Safety Evaluation Report] Compliance with WCAP–12610–P–A & CENPD–404–P–A Addendum 1–A 'Optimized ZIRLO™' (Proprietary)," LTR–NRC–07–58, November 2007, ADAMS Accession No. ML073130562) illustrate that oxide thickness (and associated hydrogen pickup) for Optimized ZIRLO™ at any given burnup would be less than for both zircaloy-4 and ZIRLO™. Hence, the NRC staff concludes that Optimized ZIRLO™ would be expected to maintain better post-quench ductility than ZIRLO™. This finding is further supported by an ongoing loss-of-coolant accident (LOCA) research program at Argonne National Laboratory, which has identified a strong correlation between cladding hydrogen content (due to in-service corrosion) and post-quench ductility.

In addition, utilizing currently-approved LOCA models and methods, the licensee states that Westinghouse will perform an evaluation to ensure that the Optimized ZIRLO™ fuel rods continue to satisfy 10 CFR 50.46 acceptance criteria. For the reasons stated above, the NRC staff finds that granting the exemption request for the VCSNS will be consistent with the underlying purpose of the regulation.

Paragraph I.A.5 of Appendix K to 10 CFR part 50 states that the rates of energy release, hydrogen concentration, and cladding oxidation from the metal-water reaction shall be calculated using the Baker-Just equation. Since the Baker-Just equation presumes the use of zircaloy clad fuel, strict application of the rule would not permit use of the equation for Optimized ZIRLO™ cladding for determining acceptable fuel performance. However, the NRC staff has found that metal-water reaction tests performed by Westinghouse on Optimized ZIRLO™ (documented in Appendix B of WCAP–12610–P–A and CENPD–404–P–A, Addendum 1–A and subject to compliance with the specific conditions of approval established therein) demonstrate conservative reaction rates relative to the Baker-Just equation. Thus, the NRC staff finds that the use of Optimized ZIRLO™ will achieve the underlying purpose of paragraph I.A.5 of Appendix K in this circumstance.

Based on the above, no new accident precursors are created by using Optimized ZIRLO™, thus, the probability of postulated accidents is not increased. Also, based on the above, the consequences of postulated accidents are not increased. In addition, the licensee will use NRC-approved methods for the reload design process for VCSNS reloads with Optimized ZIRLO™. Therefore, there is no undue risk to public health and safety due to using Optimized ZIRLO™.

Consistent With Common Defense and Security

This exemption results in allowing the use of Optimized ZIRLO™ fuel rod cladding material at the VCSNS. This change to the plant core configuration has no relation to security issues. Therefore, the common defense and security is not impacted by this exemption.

Special Circumstances

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), are present whenever application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule. The underlying purpose of 10 CFR 50.46 and Appendix K to 10 CFR part 50 is to establish acceptance criteria for ECCS performance. Therefore, since the underlying purposes of 10 CFR 50.46 and Appendix K are achieved through the use of Optimized ZIRLO™ fuel rod cladding material, the special circumstances required by 10 CFR 50.12(a)(2)(ii) for granting of an exemption from 10 CFR 50.46 and Appendix K exist.

4.0 Conclusion

The NRC staff has reviewed the licensee's request to use Optimized ZIRLO™ for fuel rod cladding material. Based on the NRC staff's evaluation as set forth above, the NRC staff concludes that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants SCE&G an exemption from the requirements of 10 CFR 50.46 and Appendix K to 10 CFR part 50, to allow the use of Optimized ZIRLO™ up to a burnup of 62 GWd/MTU for the VCSNS.

Pursuant to 10 CFR 51.32, the Commission has determined that the

granting of this exemption will not have a significant impact on the quality of the human environment as published in the **Federal Register** on March 3, 2010 (75 FR 9619). This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 8th day of March 2010.

For the Nuclear Regulatory Commission.

Joseph G. Giitter,

Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

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NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–390 and 50–391; NRC–2010–0019]

Tennessee Valley Authority: Watts Bar Nuclear Plant, Units 1 and 2 Exemption

1.0 Background

Tennessee Valley Authority (TVA, the licensee) is the holder of Facility Operating License Number NPF–90, which authorizes operation of the Watts Bar Nuclear Plant (WBN), Unit 1. TVA obtained construction permit for Unit 2 that is currently being reviewed for a requested operating licensing process; Unit 2 must meet the same requirements as a licensed plant per Title 10 of the Code of Federal Regulations (10 CFR) part 73, "Physical protection of plants and materials," Section 73.55(a)(5).

The facility consists of two Westinghouse pressurized-water reactors (Unit 1 in operation and Unit 2 under construction), located in Rhea County, Tennessee.

2.0 Request/Action

Section 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," of 10 CFR part 73, published March 27, 2009, effective May 6, 2009, with a full implementation date of March 1, 2010, requires licensees to protect, with high assurance, against radiological sabotage by designing and implementing comprehensive site security programs. The amendments to 10 CFR 73.55 published on March 27, 2009, establish and update generically applicable security requirements similar to those previously imposed by Commission orders issued after the terrorist attacks of September 11, 2001, and implemented by licensees. In addition, the amendments to 10 CFR 73.55 include additional requirements to further enhance site security based upon insights gained from implementation of the post September 11, 2001, security orders. It is from three of these new requirements that WBN, Units 1 and 2 now seeks an exemption from the March 31, 2010, implementation date. All other physical security requirements established by this recent rulemaking have already been or will be implemented by the licensee by March 31, 2010.

By letter dated November 6, 2009, as supplemented by letter dated January 11, 2010, the licensee requested an exemption in accordance with 10 CFR 73.5, "Specific exemptions." Portions of the licensee's November 6, 2009, letter contain safeguards and security sensitive information and, accordingly, are not available to the public. The January 11, 2010, letter is publicly available (Agencywide Documents Access and Management System Accession No. ML100130167). The licensee has requested an exemption from the March 31, 2010, compliance date stating that it must complete a number of significant modifications to the current site security configuration before all requirements can be met. Specifically, the request is for three specific 10 CFR 73.55 requirements that would be in place by September 24, 2012, versus the March 31, 2010, deadline. Being granted this exemption for the three items would allow the licensee to complete the modifications designed to update aging equipment and incorporate state-of-the-art technology to meet or exceed regulatory requirements.

3.0 Discussion of Part 73 Schedule Exemptions From the March 31, 2010, Full Implementation Date

Pursuant to 10 CFR 73.55(a)(1), "By March 31, 2010, each nuclear power reactor licensee, licensed under 10 CFR part 50, shall implement the requirements of this section through its Commission-approved Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan referred to collectively hereafter as 'security plans.'" Pursuant to 10 CFR 73.55(a)(5), the date applies to Unit 2 as well. Pursuant to 10 CFR 73.5, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 73 when the exemptions are authorized by law, and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

NRC approval of this exemption, as noted above, would allow an extension from March 31, 2010, until September 24, 2012. As stated above, 10 CFR 73.5 allows the NRC to grant exemptions from the requirements of 10 CFR part 73. The NRC staff has determined that granting of the licensee's proposed exemption would not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations. Therefore, NRC approval of the licensee's exemption request is authorized by law.

In the draft final rule provided to the Commission, the NRC staff proposed that the requirements of the new regulation be met within 180 days. The Commission directed a change from 180 days to approximately 1 year for licensees to fully implement the new requirements. This change was incorporated into the final rule (74 FR 13926, March 27, 2009). From this, it is clear that the Commission wanted to provide a reasonable timeframe for licensees to achieve full compliance.

As noted in the final power reactor security rule, the Commission also anticipated that licensees would have to conduct site-specific analyses to determine what changes were necessary to implement the rule's requirements, and that these changes could be accomplished through a variety of licensing mechanisms, including exemptions. Since issuance of the final rule, the Commission has rejected generic industry requests to extend the rule's compliance date for all operating nuclear power plants, but noted that the Commission's regulations provide mechanisms for individual licensees, with good cause, to apply for relief from the compliance date (Reference: June 4, 2009, letter from R.W. Borchardt, NRC, to M.S. Fertel, Nuclear Energy Institute). The licensee's request for an exemption is, therefore, consistent with the approach set forth by the Commission and discussed in the June 4, 2009, letter.

Watts Bar Schedule Exemption Request

The licensee provided detailed information in its November 6, 2009, letter, as supplemented by letter dated January 11, 2010, requesting an exemption. The NRC staff finds that the licensee has provided an adequate basis for the exemption request as well as appropriate detailed justification that describes the reason additional time is needed. Specifically, the WBN, Units 1 and 2 will be undertaking multiple large scope modifications to the physical protection program through four interrelated projects that require multiple supporting sub-tasks. These sub-tasks must be completed in sequence due to the complex interconnectivity of each project to other program components. The licensee has provided sufficiently