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If a participant is electronically submitting a document to the NRC in accordance with the E-Filing rule, the participant must file the document using the NRC's online, Web-based submission form. In order to serve documents through the Electronic Information Exchange (EIE), users will be required to install a Web browser plug-in from the NRC Web site. Further information on the Web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>.

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public Web site at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the documents are submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the agency's adjudicatory E-Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC Web site at <http://www.nrc.gov/site-help/e-submittals.html>, by e-mail at [MSHD.Resource@nrc.gov](mailto:MSHD.Resource@nrc.gov), or by a toll-free call at (866) 672-7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) First class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at [http://ehd.nrc.gov/EHD\\_Proceeding/home.asp](http://ehd.nrc.gov/EHD_Proceeding/home.asp), unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include

copyrighted materials in their submission.

If a person (other than AREVA) requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Confirmatory Order and shall address the criteria set forth in 10 CFR 2.309(d) and (f).

If a hearing is requested by a person whose interest is adversely affected, the Commission will issue an order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Confirmatory Order should be sustained.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section V above shall be final 20 days from the date this Confirmatory Order is published in the **Federal Register** without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section V shall be final when the extension expires if a hearing request has not been received.

A request for hearing shall not stay the immediate effectiveness of this order.

For the Nuclear Regulatory Commission.

Dated this 2nd day of December 2010.

**Luis A. Reyes,**

*Regional Administrator.*

[FR Doc. 2010-31175 Filed 12-10-10; 8:45 am]

**BILLING CODE P**

## **NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-366; NRC-2010-0345]**

**Southern Nuclear Operating Company, Inc.**

Edwin I Hatch Nuclear Plant, Unit No. 2; Exemption

### **1.0 Background**

The Southern Nuclear Operating Company, Inc. (SNC, the licensee) is the holder of the Renewed Facility Operating License No. NPF-5 which authorizes operation of the Edwin I. Hatch Nuclear Plant, Unit No. 2 (HNP-2). The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of a boiling-water reactor located in Appling County in Georgia.

## 2.0 Request/Action

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.12, "Specific Exemptions", SNC has, by letter dated May 12, 2010 (the application), requested an exemption from the fuel cladding material requirements in 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems [ECCS] for Light-Water Nuclear Power Reactors", and Appendix K to 10 CFR 50, "ECCS Evaluation Models," (Appendix K). The regulation in 10 CFR 50.46 contains acceptance criteria for ECCS for reactors fueled with zircaloy or ZIRLO™ cladding. In addition, Appendix K requires that the Baker-Just equation be used to predict the rates of energy release, hydrogen concentration, and cladding oxidation from the metal-water reaction. The exemption request relates solely to the specific types of cladding material specified in these regulations. As written, the regulations presume the use of zircaloy or ZIRLO™ fuel rod cladding. Thus, an exemption from the requirements of 10 CFR 50.46 and Appendix K is needed to irradiate a lead test assembly (LTA) comprised of different cladding alloys at HNP-2.

## 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 or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. Under Section 50.12(a)(2) of 10 CFR, special circumstances include, among other things, when application of the specific regulation in the particular circumstance would not serve, or is not necessary to achieve, the underlying purpose of the rule.

### Authorized by Law

This exemption would allow the licensee to insert four (Global Nuclear Fuel (GNF)) GNF2 lead test fuel assemblies manufactured with a cladding material called GNF-Ziron, which is outside of the cladding materials specified in the regulations (*i.e.*, zircaloy or ZIRLO™) into the core of HNP-2, during fuel cycles 22, 23 and 24. This exemption is similar to a previous exemption regarding the use of GE14 LTAs with a limited number of fuel rods clad in GNF-Ziron at HNP-2 that was issued on November 7, 2008. The differences are that if GNF2 fuel is

being used, all rods will be clad in GNF-Ziron, and evaluations of the LTAs will be performed using the PRIME code methodology. 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

In regard to the fuel mechanical design, the exemption request relates solely to the specific types of cladding material specified in the regulations. The underlying purpose of 10 CFR 50.46 is to establish acceptance criteria for ECCS performance. In Section V of the application, SNC provides a technical basis supporting the continued applicability of the 10 CFR 50.46, Paragraph (b), fuel criteria to GNF-Ziron. Quench tests under a restrained load have been conducted on GNF-Ziron samples oxidized to various levels at elevated loss-of-coolant accident (LOCA) temperatures. While these tests differ from the post-steam oxidized ring-compression testing (which forms the basis of the 10 CFR 50.46 post-quench ductility criteria), these results provide reasonable assurance that the 17 percent oxidation and 2200 degree Fahrenheit criteria are valid for GNF-Ziron and meet the underlying purpose of the rule, which is to maintain a degree of post-quench ductility in the fuel cladding material.

Based on an ongoing LOCA research program at Argonne National Laboratory as discussed in NRC Research Information Letter 0801, "Technical Basis for Revision of Embrittlement Criteria in 10 CFR 50.46," (Agencywide Documents Access and Management Systems (ADAMS) Accession No. ML081350225), cladding corrosion (and associated hydrogen pickup) has a significant impact on post-quench ductility. Post-irradiation examinations provided by the licensee in Enclosure 6 of its application demonstrate the favorable hydrogen pickup characteristics of GNF-Ziron as compared with standard Zircaloy-2. Hence, the GNF-Ziron fuel rods would be less susceptible to the detrimental effects of hydrogen uptake during normal operation and their impact on post-quench ductility.

Paragraph I.A.5 of Appendix K to 10 CFR Part 50 states that the rates of energy, 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 the LTA cladding for determining acceptable fuel performance. Metal-water reaction tests performed by GNF on GNF-Ziron (Figure B-15 of Enclosure 5) of the application demonstrate conservative reaction rates relative to the Baker-Just equation. Thus, application of Appendix K, Paragraph I.A.5, is not necessary for the licensee to achieve its underlying purpose in these circumstances.

High temperature burst test results are provided in Figure B-6 (Enclosure 5 of Reference 1). These test results illustrate similar burst characteristics of GNF-Ziron as compared with standard Zry-2. In addition, Enclosure 6 of Reference 1 provides further comparisons of material properties between GNF-Ziron and Zry-2. Based upon this comparison of material properties, GNF and SNC believe that currently approved methods and models are directly applicable to GNF-Ziron. Based upon the material properties provided in References 1 and 2, the NRC staff finds the use of current LOCA models and methods acceptable for the purpose of evaluating LTAs containing GNF-Ziron fuel rods.

In support of its exemption request, SNC submitted a GNF document entitled, "GNF-Ziron Performance Benefits and Licensing Requirements Assessment" (Enclosure 6 of the application). This report provides a logical assessment of the potential impact of differences in material properties on the PRIME fuel thermal-mechanical methodology. While not directly related to the 10 CFR 50.46 exemption request, the NRC staff finds the conclusion of this report acceptable for the purpose of evaluating LTAs containing GNF-Ziron fuel rods. Further NRC staff review may be necessary prior to use of PRIME for batch application of GNF-Ziron fuel cladding material.

Through mechanical testing and a comparison of material properties, SNC has provided reasonable assurance that anticipated in-reactor performance will be acceptable. Further, the licensee has demonstrated that the use of current methods and models are reasonable for evaluating the cladding's performance to anticipated operational occurrences and accidents. Nevertheless, as with any developmental cladding alloy, the NRC staff requires a limitation on the total number of fuel rods clad in a developmental alloy in order to ensure a minimal impact on the simulated progression and calculated

consequences of postulated accidents. This limitation is directly related to the available material properties (both unirradiated and irradiated) used to judge the cladding alloy's anticipated in-reactor performance.

Based upon results of metal-water reaction tests and mechanical testing which ensure the applicability of ECCS models and acceptance criteria, the limited number and anticipated performance of the advanced cladding fuel rods, and the use of approved LOCA models to ensure that the LTAs satisfy 10 CFR 50.46 acceptance criteria, the NRC staff finds it acceptable to grant an exemption from the requirements of 10 CFR 50.46 and Appendix K to 10 CFR Part 50 for the use of four GNF2 LTAs within HNP-2.

*Consistent with Common Defense and Security*

The proposed exemption would allow the licensee to insert four lead test fuel assemblies with fuel rod cladding that does not meet the definition of Zircaloy or ZIRLO™ as specified by 10 CFR 50.46, and Appendix K, into the core of HNP-2, during fuel cycles 22, 23 and 24. This change 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, 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 emergency core cooling system performance. The wording of the regulations in 10 CFR 50.46 and Appendix K is not directly applicable to these advanced cladding alloys, even though the evaluations discussed above show that the intent of the regulations is met. Therefore, since the underlying purpose of 10 CFR 50.46 and Appendix K is achieved with the use of these advanced cladding alloys, the special circumstances required by 10 CFR 50.12 for the granting of an exemption from 10 CFR 50.46 and Appendix K exist.

#### 4.0 Conclusion

Accordingly, the Commission has determined 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 SNC exemptions from the requirements of 10 CFR 50.46, and 10 CFR Part 50, Appendix K, to allow the limited use of four LTAs with GNF-Ziron cladding during fuel cycles 22, 23 and 24 for the HNP-2 plant.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment (75 FR 69137; November 10, 2010).

This exemption is effective upon issuance.

Dated at Rockville, Maryland this 3rd day of December 2010.

For the Nuclear Regulatory Commission.  
**Joseph G. Giitter,**  
*Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.*

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developing on the topics of advanced manufacturing and biodiversity preservation and ecosystem sustainability. Additional information and the agenda will be posted at the PCAST Web site at: <http://whitehouse.gov/ostp/pcast>.

*Closed Portion of the Meeting:* PCAST may hold a closed meeting of approximately 1 hour with the President on January 7, 2011, which must take place in the White House for the President's scheduling convenience and to maintain Secret Service protection. This meeting will be closed to the public because such portion of the meeting is likely to disclose matters that are to be kept secret in the interest of national defense or foreign policy under 5 U.S.C. 552b(c)(1). The precise date and time of this potential meeting has not yet been determined.

*Public Comments:* It is the policy of the PCAST to accept written public comments of any length, and to accommodate oral public comments whenever possible. The PCAST expects that public statements presented at its meetings will not be repetitive of previously submitted oral or written statements.

The public comment period for this meeting will take place on January 7, 2011 at a time specified in the meeting agenda posted on the PCAST Web site at <http://whitehouse.gov/ostp/pcast>. This public comment period is designed only for substantive commentary on PCAST's work, not for business marketing purposes.

*Oral Comments:* To be considered for the public speaker list at the meeting, interested parties should register to speak at <http://whitehouse.gov/ostp/pcast>, no later than 12 p.m. Eastern Time on Wednesday, December 22, 2010. Phone or e-mail reservations will not be accepted. To accommodate as many speakers as possible, the time for public comments will be limited to two (2) minutes per person, with a total public comment period of 30 minutes. If more speakers register than there is space available on the agenda, PCAST will randomly select speakers from among those who applied. Those not selected to present oral comments may always file written comments with the committee. Speakers are requested to bring at least 25 copies of their oral comments for distribution to the PCAST members.

*Written Comments:* Although written comments are accepted until the date of the meeting, written comments should be submitted to PCAST at least two weeks prior to each meeting date, December 22, 2010, so that the comments may be made available to the

## OFFICE OF SCIENCE AND TECHNOLOGY POLICY

### Partially Closed Meeting of the President's Council of Advisors on Science and Technology

**AGENCY:** President's Council of Advisors on Science and Technology, Office of Science and Technology Policy.

**ACTION:** Public notice.

**SUMMARY:** This notice sets forth the schedule and summary agenda for a partially closed meeting of the President's Council of Advisors on Science and Technology (PCAST), and describes the functions of the Council. Notice of this meeting is required under the Federal Advisory Committee Act (FACA), 5 U.S.C., App.

**DATES:** January 7, 2011.

**ADDRESSES:** The meeting will be held at the Marriott Metro Center, 775 12th Street, NW., Room Junior Ballrooms 2-3, Washington, DC.

*Type of Meeting:* Open and Closed.

*Proposed Schedule and Agenda:* The President's Council of Advisors on Science and Technology (PCAST) is scheduled to meet in open session on January 7, 2011 from 10 a.m. to 5 p.m. with a lunch break from 12:15 p.m. to 1:30 p.m.

*Open Portion of Meeting:* During this open meeting, PCAST is tentatively scheduled to hear presentations on agriculture research and development, the National Science Foundation, synthetic biology, national security, and international affairs. PCAST members will also discuss reports they are