

NUCLEAR REGULATORY COMMISSION

[NRC-2010-0390]

NOTICE

APPLICATIONS AND AMENDMENTS TO FACILITY OPERATING LICENSES
INVOLVING PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATIONS
AND CONTAINING SENSITIVE UNCLASSIFIED NON-SAFEGUARDS INFORMATION
AND ORDER IMPOSING PROCEDURES FOR ACCESS TO SENSITIVE UNCLASSIFIED
NON-SAFEGUARDS INFORMATION

I. Background

Pursuant to section 189a. (2) of the Atomic Energy Act of 1954, as amended (the Act), the U.S. Nuclear Regulatory Commission (the Commission or NRC) is publishing this notice. The Act requires the Commission publish notice of any amendments issued, or proposed to be issued and grants the Commission the authority to issue and make immediately effective any amendment to an operating license upon a determination by the Commission that such amendment involves no significant hazards consideration, notwithstanding the pendency before the Commission of a request for a hearing from any person.

This notice includes notices of amendments containing sensitive unclassified non-safeguards information (SUNSI).

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO
FACILITY OPERATING LICENSES, PROPOSED NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The Commission has made a proposed determination that the following amendment requests involve no significant hazards consideration. Under the Commission's regulations in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The basis for this proposed determination for each amendment request is shown below.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of 60 days after the date of publication of this notice. The Commission may issue the license amendment before expiration of the 60-day period provided that its final determination is that the amendment involves no significant hazards consideration. In addition, the Commission may issue the amendment prior to the expiration of the 30-day comment period should circumstances change during the 30-day comment period such that failure to act in a timely way would result, for example in derating or shutdown of the facility. Should the Commission take action prior to the expiration of either the comment period or the notice period, it will publish in the *Federal Register* a notice of issuance. Should the Commission make a final No Significant

Hazards Consideration Determination, any hearing will take place after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules, Announcements and Directives Branch (RADB), TWB-05-B01M, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this *Federal Register* notice. Written comments may also be faxed to the RADB at 301-492-3446. 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.

Within 60 days after the date of publication of this notice, any person(s) whose interest may be affected by this action may file a request for a hearing and a petition to intervene with respect to issuance of the amendment to the subject facility operating license. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested person(s) should consult a current copy of 10 CFR 2.309, which is available at the Commission's PDR, located at One White Flint North, Public File Area O1F21, 11555 Rockville Pike (first floor), Rockville, Maryland, or at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part002/part002-0309.html>. Publicly available records will be accessible from the Agencywide Documents Access and Management System's (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm.html>. If a request for a hearing or petition for leave to intervene is filed within 60 days, the Commission or a presiding officer designated by the Commission or by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the Chief Administrative Judge of the Atomic Safety and Licensing Board will issue a notice of a hearing or an appropriate order.

As required by 10 CFR 2.309, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements: 1) the name, address, and telephone number of the requestor or petitioner; 2) the nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding; 3) the nature and extent of the requestor's/petitioner's property, financial, or other interest in the proceeding; and 4) the possible effect of any decision or order which may be entered in the proceeding on the requestor's/petitioner's interest. The petition must also set forth the specific contentions which the requestor/petitioner seeks to have litigated at the proceeding.

Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the requestor/petitioner shall provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the requestor/petitioner intends to rely in proving the contention at the hearing. The requestor/petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the requestor/petitioner intends to rely to establish those facts or expert opinion. The petition must include sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the requestor/petitioner to relief. A requestor/petitioner who fails to satisfy these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing.

If a hearing is requested, and the Commission has not made a final determination on the issue of no significant hazards consideration, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule (72 FR 49139, August 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten (10) days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at hearing.docket@nrc.gov, or by telephone at (301) 415-1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and

(2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals/apply-certificates.html>. System requirements for accessing the E-Submittal server are detailed in NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>. Participants may attempt to use other software not listed on the Web site, but should note that the NRC's E-Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

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 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, 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, 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.

Petitions for leave to intervene must be filed no later than 60 days from the date of publication of this notice. Non-timely filings will not be entertained absent a determination by the presiding officer that the petition or request should be granted or the contentions should be admitted, based on a balancing of the factors specified in 10 CFR 2.309(c)(1)(i)–(viii).

For further details with respect to this amendment action, see the application for amendment which is available for public inspection at the Commission's PDR, located at One White Flint North, Public File Area 01F21, 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>. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the PDR Reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov.

Entergy Operations, Inc., System Energy Resources, Inc., South Mississippi Electric Power Association, and Entergy Mississippi, Inc., Docket No. 50-416, Grand Gulf Nuclear Station, Unit 1, Claiborne County, Mississippi

Date of amendment request: September 8, 2010, as supplemented by letters dated November 18 and 23, 2010.

Description of amendment request: **This amendment request contains sensitive unclassified non-safeguards information (SUNSI).** The proposed license amendment request will increase the maximum reactor core power operating limit from 3,898 megawatts thermal (MWt) to 4,408 MWt at Grand Gulf Nuclear Station (GGNS), Unit 1. The following Operating License (OL) and Technical Specification (TS) sections, and associated TS bases, will be revised as result of the proposed extended power uprate (EPU):

- OL Paragraph 2.C.(1) and the addition of new license conditions
- Definitions - Rated Thermal Power (RTP) and a new definition for Pressure and Temperature Limits Report (PTLR)
- Thermal Power Limit with Low Dome Pressure or Low Core Flow (TS 2.1.1.1)
- Minimum Critical Power Ratio (MCPR) Safety Limit (TS 2.1.1.2)
- Standby Liquid Control (SLC) System (TS 3.1.7)
- Average Planar Linear Heat Generation Rate (APLHGR) (TS 3.2.1)
- Minimum Critical Power Ratio (MCPR) (TS 3.2.2)
- Linear Heat Generation Rate (LHGR) (TS 3.2.3)
- Reactor Protection System (RPS) Instrumentation (TS 3.3.1.1)
- End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation (TS 3.3.4.1)
- Primary Containment and Drywell Isolation Instrumentation (TS 3.3.6.1)
- Jet Pumps (TS 3.4.3)

- Safety / Relief Valves (TS 3.4.4)
- Reactor Coolant System (RCS) Pressure and Temperature (P/T) Limits (TS 3.4.11)
- Main Turbine Bypass System (New TS 3.7.7), and
- RCS Pressure and Temperature Limits Report (PTLR) (New TS 5.6.6).

Basis for proposed no significant hazards consideration determination: As required by 10 CFR

50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No, the increase in power level does not significantly increase the probability or consequences of an accident previously evaluated.

The proposed change will increase the maximum authorized core power level for GGNS from the current licensed thermal power (CLTP) of 3898 megawatts thermal (MWt) to 4408 MWt. Evaluations and analyses of the nuclear steam supply system (NSSS) and balance of plant (BOP) structures, systems, and components (SSCs) that could be affected by the power uprate were performed in accordance the approaches described in:

- NEDC-33004P-A (commonly called CLTR), *Licensing Topical Report Constant Pressure Power Uprate, Revision 4*;
- NEDC-32424P-A (commonly called ELTR1), *Generic Guidelines for General Electric Boiling Water Reactor Extended Power Uprate* and
- NEDC-32523P-A (commonly called ELTR2), *Generic Evaluations of General Electric Boiling Water Reactor Extended Power Uprate*

The evaluations concluded that all plant components, as modified, will continue to be capable of performing their design function at the proposed uprated core power level.

The GGNS licensing and design bases, including GGNS accident analyses, were also evaluated for the effect of the proposed power increase. The evaluation concluded that the applicable analysis acceptance criteria continue to be met. Power level is not an initiator of any transient or accident; it is used as an input assumption to equipment design and accident analyses.

The proposed change does not affect the release paths or the frequency of release for any accidents previously evaluated in the [Updated Final Safety Analysis Report]. Structures, systems, and components required to mitigate

transients remain capable of performing their design functions considering radiological consequences associated with the effect of the proposed EPU. The source terms used to evaluate the radiological consequences were reviewed and were determined to bound operation at EPU power levels. The results of EPU accident evaluations do not exceed NRC-approved acceptance limits.

The spectrum of postulated accidents and transients were reviewed and were shown to meet the regulatory criteria to which GGNS is currently licensed. In the area of fuel and core design, the Safety Limit Minimum Critical Power Ratio (SLMCPR) and other Specified Acceptable Fuel Design Limits (SAFDLs) are still met. Continued compliance with the [SLMCPR] and other SAFDLs is confirmed on a cycle specific basis consistent with the criteria accepted by the NRC.

Challenges to the reactor coolant pressure boundary were evaluated at EPU conditions (pressure, temperature, flow, and radiation) and found to meet the acceptance criteria for allowable stresses. Adequate overpressure margin is maintained.

Challenges to the containment were also evaluated. Containment and its associated cooling system continue to meet applicable regulatory requirements. The increase in the calculated post Loss of Coolant Accident (LOCA) suppression pool temperature above the current design limit was evaluated and determined to be acceptable.

Radiological releases were evaluated and found to be within the regulatory limits of 10CFR 50.67, Accident Source Terms.

Change in Methodologies

The use of more accurate modeling of the annulus pressurization loads is not relevant to accident initiation, but rather, pertains to the method used to accurately evaluate annulus pressurization during postulated accidents. The use of a new method does not, in any way, alter any fission product barrier or SSC and provides a better representation of dynamic behavior.

The GGNS containment analysis was performed using the SHEX computer code, which is not relevant to accident initiation.

The GGNS steam dryer evaluation was performed using a plant based load evaluation method. The use of this evaluation is not relevant to accident initiation. The steam dryer is a non-safety related component.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No, the increase in power does not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed change increases the maximum authorized core power level for GGNS from the CLTP of 3898 MWt to 4408 MWt. An evaluation of the equipment that could be affected by the power uprate has been performed. No new operating modes, safety-related equipment lineups, accident scenarios, or equipment failure modes were identified. The full spectrum of accident considerations was evaluated and no new or different kinds of accidents were identified. For GGNS, the standard evaluation methods outlined in CLTR, ELTR1, and ELTR2 were applied to the capability of existing or modified safety-related plant equipment. No new accidents or event precursors were identified.

All SSCs previously required for the mitigation of a transient remain capable of fulfilling their intended design functions. The proposed increase in power does not adversely affect safety-related systems or components and does not challenge the performance or integrity of any safety-related system. The change does not adversely affect any current system interfaces or create any new interfaces that could result in an accident or malfunction of a different kind than was previously evaluated. Operating at the proposed EPU power level does not create any new accident initiators or precursors.

Change in Methodologies

The use of more accurate modeling of the annulus pressurization loads is not relevant to accident initiation, but rather, pertains to the method used to accurately evaluate annulus pressurization during postulated accidents. The use of this methodology does not involve any physical changes to plant structures or systems, and does not create a new initiating event for the spectrum of events currently postulated. Further, the methodologies do not result in the need to postulate any new accident scenarios.

The GGNS containment analysis was performed using the SHEX computer code, which is not an accident initiator and therefore does not result in the creation of any new accidents.

The use of the plant based load evaluation method to perform the GGNS steam dryer analysis does not result in the creation of any new accidents since the steam dryer is not safety-related and is not considered an accident initiator.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No, the proposed increase in power does not involve a significant reduction in a margin of safety.

Based on the analyses of the proposed power increase, the relevant design and safety acceptance criteria will be met without a significant reduction in margins of safety. The analyses supporting EPU have demonstrated that the GGNS SSCs are capable of safely performing at EPU conditions. The analyses identified and defined the major input parameters to the NSSS, analyzed NSSS design transients, and evaluated the capabilities of the NSSS fluid systems, NSSS/BOP interfaces, NSSS control systems, and NSSS and BOP components, as appropriate. Radiological consequences of design basis events remain within regulatory limits and are not increased significantly. The analyses confirmed that NSSS and BOP SSCs are capable, some with modifications, of achieving EPU conditions without significant reduction in margins of safety.

Analyses have shown that the integrity of primary fission product barriers will not be significantly affected as a result of the power increase. Calculated loads on SSCs important to safety have been shown to remain within design allowable under EPU conditions for all design basis event categories. Plant response to transients and accidents do not result in exceeding acceptance criteria.

As appropriate, the evaluations that demonstrate acceptability of EPU have been performed using methods that have either been reviewed and approved by the NRC staff, or that are in compliance with regulatory review guidance and standards established for maintaining adequate margins of safety. These evaluations demonstrate that there are no significant reductions in the margins of safety.

Maximum power level is one of the inherent inputs that determine the safe operating range defined by the accident analyses. The Technical Specifications ensure that GGNS is operated within the bounds of the inputs and assumptions used in the accident analyses. The acceptance criteria for the accident analyses are conservative with respect to the operating conditions defined by the Technical Specifications. The engineering reviews performed for the constant pressure extended power uprate confirm that the accident analyses criteria are met at the revised maximum allowable thermal power level of 4408 MWt. Therefore, the adequacy of the revised Facility Operating License and Technical Specifications to maintain the plant in a safe operating range is also confirmed, and the increase in maximum allowable power level does not involve a significant decrease in a margin of safety.

Change in Methodologies

The use of more accurate modeling of the annulus pressurization loads is not relevant to accident initiation, but rather, pertains to the method used to accurately evaluate annulus pressurization during postulated accidents. The

use of a more accurate methodology to generate mass and energy release rates reduces the potential for methodology induced response profile frequency shifts that could result in a non-conservative load assessment. The use of more accurate methods, to minimize the impact of methodology induced response profile frequency shifts, does not result in a reduction in the margin of safety.

In light of issues identified in GEH [GE-Hitachi Nuclear Energy Americas LLC] Safety Information Concern SC 09-01, *Annulus Pressurization Loads Evaluation*, dated June 8, 2009, a realistic annulus pressurization methodology is required to ensure that the frequency content of the annulus pressurization transient is captured and correctly accounted for in the downstream structural, component and piping load analyses. The use of more accurate modeling of the annulus pressurization loads does not adversely impact containment SSCs or the subcompartments.

The GGNS containment analysis was performed using the SHEX computer code. The results of the containment analysis demonstrate that the containment remains within all of its design limits following the most limiting design basis accident.

The steam dryer evaluation was performed in accordance with [NRC] Regulatory Guide 1.20, *Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing*. The non-safety related replacement steam dryer conservatively exceeds the vibration and stress requirements.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: Joseph A. Aluise, Associate General Counsel - Nuclear, Entergy Services, Inc., 639 Loyola Avenue, New Orleans, Louisiana 70113.

NRC Branch Chief: Michael T. Markley.

PSEG Nuclear LLC, Docket No. 50-354, Hope Creek Generating Station, Salem County, New Jersey

Date of amendment request: September 22, 2010.

Description of amendment request: **This amendment request contains sensitive unclassified non-safeguards information (SUNSI).** The proposed amendment would modify the Facility Operating License and Technical Specifications (TSs) to allow Hope Creek Generating Station (HCGS) to operate at a reduced feedwater temperature for purposes of extending the normal fuel cycle. The amendment would also allow operation with feedwater heaters out-of-service at any time during the operating cycle.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below with Nuclear Regulatory Commission (NRC) staff edits in square brackets:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The effect of FWTR [feedwater temperature reduction] on the probability and consequences of accidents, Anticipated Operational Occurrences (AOO) and events in the Updated Final Safety Analysis (UFSAR) were reviewed.

The impact of FWTR on the Design Basis Accident (DBA) Loss of Coolant Accident (LOCA) was considered. Evaluations and analyses were performed to determine that the current Licensing Basis PCT [peak cladding temperature] remains applicable for operation of HCGS with FWTR. The calculated maximum fuel element cladding temperature does not exceed 2,200°F, the calculated total local oxidation does not exceed 17% times the total cladding thickness, the calculated total amount of hydrogen generated from a chemical reaction of the cladding with water or steam is less than 1% times the hypothetical amount if all the metal in the cladding cylinder were to react, the core remains amenable to long term cooling, and there is sufficient long term core cooling available. Analysis also demonstrated that FWTR operation at HCGS continues to meet design limits for the DBA-LOCA peak drywell pressure and temperature. Therefore, there is no increase in the consequence of an accident previously evaluated in the UFSAR.

The only AOO that requires consideration in assessing the effect of FWTR on event consequences is the feedwater controller failure - increasing flow (FWCF). This is based upon the finding that the other AOOs are less sensitive to a reduction in feedwater temperature. The rated power and off-rated Power Distribution Limits, Critical Power Ratio [CPR] and Linear Heat Generation Rate [LHGR], for the FWCF event are validated on a cycle specific basis to ensure compliance with the Safety Limit Minimum Critical Power Ratio (SLMCPR) and compliance with the fuel rod thermal mechanical acceptance criteria of avoiding fuel centerline melt and 1% cladding plastic strain. Consequently, there is no increase in the consequences of an AOO previously evaluated.

The impact of FWTR on the consequences of the following events was also considered: Anticipated Transient Without Scram (ATWS), vessel overpressure, thermal-hydraulic stability, and High Energy Line Break (HELB). The evaluation of ATWS and vessel overpressure concluded that the consequences of the events at normal feedwater temperature remain bounding for FWTR. The evaluation of HELB determined the impact was bounded by the current design basis. Thermal-hydraulic stability considerations, as impacted by FWTR, involve both the determination of a cycle specific OPRM [oscillation power range monitor] setpoint and determination of a cycle specific backup stability protection (BSP) regions and corresponding adequacy of the OPRM trip enabled region. The cycle specific determinations and validations performed in accordance with NRC-approved methods ensure that the SLMCPR will be protected if a thermal hydraulic stability event were to occur. Therefore, there is no increase in the consequence of these events previously evaluated in the UFSAR.

In addition, the following areas were also evaluated. The reactor power level and operating pressure are not changed. FWTR has no effect on the decay heat. Current design limits associated with long-term containment analyses, including RSLB [recirculation suction line break], loss of offsite power (LOOP), intermediate break accident (IBA), small break accident (SBA), and NUREG-0783 safety relief valve (SRV) steam discharge events continue to be supported without change. Therefore, there is no increase in the consequence of these events previously evaluated in the UFSAR.

The probability of an accident is not affected by the proposed changes since no structures, systems or components (SSC) which could initiate an accident are affected. Therefore, the proposed changes do not significantly increase the probability of any previously evaluated accident.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not alter the design function of any SSC. The implementation of FWTR operation does not create the possibility of a new or different kind of accident. Power Distribution Limits on CPR, LHGR and APLHGR [average planar linear heat generation rate], and OPRM setpoints, which are determined in accordance with NRC-approved methods and are included in the Core Operating Limits Report (COLR), as part of the normal reload licensing process will continue to assure that core operation is in accordance with the conditions currently assumed for event initiation. FWTR was reviewed against the accidents, AOOs and events in the UFSAR and it was determined there would be no adverse impact; the existing design basis remains bounding. In addition, the proposed changes do not involve new system interactions or equipment modifications to the plant. FWTR does not involve any new type of testing or maintenance. Therefore there are no new design basis failure mechanisms, malfunctions, or accident initiators created by the proposed changes.

The existing low power scram bypass setpoint, based on turbine first stage pressure and the calculated change in steam flow was evaluated. At a reduced feedwater temperature, it was concluded that the reactor scram bypass setting for turbine first stage pressure was not sufficiently conservative relative to the TS value of 24% rated thermal power. Therefore a new setpoint of approximately 21.4% has been calculated. The new set-point increases the low power bypass set-point conservatism at normal feedwater temperature (NFWT) and maintains the same conservatism at FFWTR [final feedwater temperature reduction] conditions.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The AOOs and accidents described in the UFSAR were evaluated for effects caused by the reduced feedwater temperature. For cycle independent considerations, the evaluations determined that the consequences of the events are either bounded by the current design and licensing basis results, are within design acceptance criteria, or will not change in a manner that would reduce the margin of safety. For cycle specific considerations, cycle specific analyses utilizing NRC-approved methods that produce the values of the limits documented in the COLR will continue to assure that core operation is maintained within the existing design basis and safety limits. No design basis or safety limit is altered by the proposed change.

The existing low power scram bypass setpoint, based on turbine first stage pressure and the calculated change in steam flow was evaluated. At a reduced feedwater temperature, it was concluded that the reactor scram bypass setting for turbine first stage pressure was not sufficiently conservative relative to the TS value of 24% rated thermal power. Therefore a new setpoint of approximately 21.4% has been calculated. The new set-point increases the low power bypass set-point conservatism at NFWT and maintains the same conservatism at FFWTR conditions.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, and with the changes noted above in square brackets, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: Vincent Zabielski, PSEG Nuclear LLC - N21, P.O. Box 236, Hancocks Bridge, NJ 08038.

NRC Branch Chief: Harold K. Chernoff.

Tennessee Valley Authority, Docket Nos. 50-259, Browns Ferry Nuclear Plant, Unit 1, Limestone County, Alabama

Date of amendment request: October 23, 2009, as supplemented by letters dated November 17, 2009, and April 16, 2010 (TS-473).

Description of amendment request: **This amendment request contains sensitive unclassified non-safeguards information (SUNSI).** Tennessee Valley Authority (the licensee) plans to transition Browns Ferry Nuclear Plant (BFN), Unit 1 to AREVA fuel. To support the transition, the proposed amendment adds the AREVA NP analysis methodologies to the list of approved methods to be used in determining the core operating limits in the core operating limits report. Additional technical specification (TS) changes are requested to reflect the AREVA NP specific methods for monitoring and enforcing the thermal limits. The licensee request is for nonextended power uprate conditions (i.e., 105 percent of Original Licensed Thermal Power level) only.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

Criterion 1: Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

Changing fuel designs and making an editorial change to TS will not increase the probability of a loss of coolant accident. The fuel cannot increase the probability of a primary coolant system breach or rupture, as there is no interaction between the fuel and the system piping. The fuel will continue to meet the 10 CFR 50.46 limits for peak clad temperature, oxidation fraction, and hydrogen generation. Therefore, the consequences of a LOCA [loss-of-coolant-accident] will not be increased.

Similarly, changing the fuel design and making an editorial change to TS cannot increase the probability of an abnormal operating occurrence (AOO). As a passive component, the fuel does not interact with plant operating or control systems. Therefore, the fuel change cannot affect the initiators of the previously evaluated AOO transient events. Thermal limits for the new fuel will be determined on a reload specific basis, ensuring the specified acceptable fuel design limits continue to be met. Therefore, the consequences of a previously evaluated AOO will not increase.

The refueling accident is potentially affected by a change in fuel design due to the mechanical interaction between the fuel and the refueling equipment. However, the probability of the refueling accident with ATRIUM-10 fuel is not increased because the upper bail handle is designed to be mechanically compatible with existing fuel handling equipment. The design weight of the ATRIUM-10 design is similar to other designs in use at BFN and is well within the design capability of the refueling equipment. The consequences of the refueling accident are similar to the current GE14 fuel, remaining well within the design basis (7x7 Fuel) evaluation in the UFSAR [Updated Final Safety Analysis Report].

The probability of a control rod drop accident does not increase because the ATRIUM-10 fuel channel is mechanically compatible with the co-resident fuel and existing control blade designs. The mechanical interaction and friction forces between the ATRIUM-10 channel and control blades would not be higher than previous designs. In addition, routine plant testing includes confirmation of adequate control blade to control rod drive coupling. The probability of a rod drop accident is not increased with the use of ATRIUM-10 fuel. Control rod drop accident consequences are evaluated on a cycle specific basis, confirming the number of calculated rod failures remains with the UFSAR design basis.

The dose consequences of all the previously evaluated UFSAR accidents remain within the limits of 10 CFR 50.67.

Criterion 2: Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The ATRIUM-10 fuel product has been designed to maintain neutronic, thermal-hydraulic, and mechanical compatibility with the NSSS [Nuclear Steam Supply System] vendor fuel designs. The ATRIUM-10 fuel has been designed to meet fuel licensing criteria specified in NUREG-0800, "Standard Review Plan for Review of Safety Analysis Reports for Nuclear Power Plants." Compliance with these criteria ensures the fuel will not fail in an unexpected manner. A change in fuel design and an editorial change to TS cannot create any new accident initiators because the fuel is a passive component having no direct influence on the performance of operating plant systems and equipment. Hence, a fuel design change cannot create a new type of malfunction leading to a new or different kind of transient or accident. Consequently, the proposed fuel design change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3: Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

The ATRIUM-10 fuel is designed to comply with the fuel licensing criteria specified in NUREG-0800. Reload specific and cycle independent safety analyses are performed ensuring no fuel failures will occur as the result of abnormal operational transients, and dose consequences for accidents remain within the bounds of 10 CFR 50.67. All regulatory margins and requirements are maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: General Counsel, Tennessee Valley Authority, 400 West Summit Hill Drive, 6A West Tower, Knoxville, Tennessee 37902.

NRC Branch Chief: Douglas A. Broaddus.

**Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards
Information for Contention Preparation.**

Entergy Operations, Inc., System Energy Resources, Inc., South Mississippi Electric Power
Association, and Entergy Mississippi, Inc., Docket No. 50-416, Grand Gulf Nuclear Station, Unit
1, Claiborne County, Mississippi

PSEG Nuclear LLC, Docket No. 50-354, Hope Creek Generating Station, Salem County, New
Jersey

Tennessee Valley Authority, Docket Nos. 50-259, Browns Ferry Nuclear Plant, Unit 1,
Limestone County, Alabama

A. This Order contains instructions regarding how potential parties to this proceeding may request access to documents containing Sensitive Unclassified Non-Safeguards Information (SUNSI).

B. Within 10 days after publication of this notice of hearing and opportunity to petition for leave to intervene, any potential party who believes access to SUNSI is necessary to respond to this notice may request such access. A "potential party" is any person who intends to participate as a party by demonstrating standing and filing an admissible contention under 10 CFR 2.309. Requests for access to SUNSI submitted later than 10 days after publication will

not be considered absent a showing of good cause for the late filing, addressing why the request could not have been filed earlier.

C. The requestor shall submit a letter requesting permission to access SUNSI to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, and provide a copy to the Associate General Counsel for Hearings, Enforcement and Administration, Office of the General Counsel, Washington, DC 20555-0001. The expedited delivery or courier mail address for both offices is: U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville, Maryland 20852. The e-mail address for the Office of the Secretary and the Office of the General Counsel are *Hearing.Docket@nrc.gov* and *OGCmailcenter@nrc.gov*, respectively.¹ The request must include the following information:

- (1) A description of the licensing action with a citation to this *Federal Register* notice;
- (2) The name and address of the potential party and a description of the potential party's particularized interest that could be harmed by the action identified in C.(1);
- (3) The identity of the individual or entity requesting access to SUNSI and the requestor's basis for the need for the information in order to meaningfully participate in this adjudicatory proceeding. In particular, the request must explain why publicly-available versions of the information requested would not be sufficient to provide the basis and specificity for a proffered contention;

D. Based on an evaluation of the information submitted under paragraph C.(3) the NRC staff will determine within 10 days of receipt of the request whether:

¹ While a request for hearing or petition to intervene in this proceeding must comply with the filing requirements of the NRC's "E-Filing Rule," the initial request to access SUNSI under these procedures should be submitted as described in this paragraph.

(1) There is a reasonable basis to believe the petitioner is likely to establish standing to participate in this NRC proceeding; and

(2) The requestor has established a legitimate need for access to SUNSI.

E. If the NRC staff determines that the requestor satisfies both D.(1) and D.(2) above, the NRC staff will notify the requestor in writing that access to SUNSI has been granted. The written notification will contain instructions on how the requestor may obtain copies of the requested documents, and any other conditions that may apply to access to those documents. These conditions may include, but are not limited to, the signing of a Non-Disclosure Agreement or Affidavit, or Protective Order² setting forth terms and conditions to prevent the unauthorized or inadvertent disclosure of SUNSI by each individual who will be granted access to SUNSI.

F. Filing of Contentions. Any contentions in these proceedings that are based upon the information received as a result of the request made for SUNSI must be filed by the requestor no later than 25 days after the requestor is granted access to that information. However, if more than 25 days remain between the date the petitioner is granted access to the information and the deadline for filing all other contentions (as established in the notice of hearing or opportunity for hearing), the petitioner may file its SUNSI contentions by that later deadline.

G. Review of Denials of Access.

(1) If the request for access to SUNSI is denied by the NRC staff either after a determination on standing and need for access, or after a determination on trustworthiness and

² Any motion for Protective Order or draft Non-Disclosure Affidavit or Agreement for SUNSI must be filed with the presiding officer or the Chief Administrative Judge if the presiding officer has not yet been designated, within 30 days of the deadline for the receipt of the written access request.

reliability, the NRC staff shall immediately notify the requestor in writing, briefly stating the reason or reasons for the denial.

(2) The requestor may challenge the NRC staff's adverse determination by filing a challenge within 5 days of receipt of that determination with: (a) the presiding officer designated in this proceeding; (b) if no presiding officer has been appointed, the Chief Administrative Judge, or if he or she is unavailable, another administrative judge, or an administrative law judge with jurisdiction pursuant to 10 CFR 2.318(a); or (c) if another officer has been designated to rule on information access issues, with that officer.

H. Review of Grants of Access. A party other than the requestor may challenge an NRC staff determination granting access to SUNSI whose release would harm that party's interest independent of the proceeding. Such a challenge must be filed with the Chief Administrative Judge within 5 days of the notification by the NRC staff of its grant of access.

If challenges to the NRC staff determinations are filed, these procedures give way to the normal process for litigating disputes concerning access to information. The availability of interlocutory review by the Commission of orders ruling on such NRC staff determinations (whether granting or denying access) is governed by 10 CFR 2.311.³

I. The Commission expects that the NRC staff and presiding officers (and any other reviewing officers) will consider and resolve requests for access to SUNSI, and motions for protective orders, in a timely fashion in order to minimize any unnecessary delays in identifying those petitioners who have standing and who have propounded contentions meeting the

³ Requestors should note that the filing requirements of the NRC's E-Filing Rule (72 FR 49139; August 28, 2007) apply to appeals of NRC staff determinations (because they must be served on a presiding officer or the Commission, as applicable), but not to the initial SUNSI request submitted to the NRC staff under these procedures.

specificity and basis requirements in 10 CFR Part 2. Attachment 1 to this Order summarizes the general target schedule for processing and resolving requests under these procedures.

IT IS SO ORDERED. Dated at Rockville, Maryland, this 4th day of January, 2011.

For the Nuclear Regulatory Commission.

/RA/

Andrew L. Bates,
Acting Secretary of the Commission.

ATTACHMENT 1--General Target Schedule for Processing and Resolving Requests for Access to Sensitive Unclassified Non-Safeguards Information in this Proceeding

Day	Event/Activity
0	Publication of <i>Federal Register</i> notice of hearing and opportunity to petition for leave to intervene, including order with instructions for access requests.
10	Deadline for submitting requests for access to Sensitive Unclassified Non-Safeguards Information (SUNSI) with information: supporting the standing of a potential party identified by name and address; describing the need for the information in order for the potential party to participate meaningfully in an adjudicatory proceeding.
60	Deadline for submitting petition for intervention containing: (i) Demonstration of standing; (ii) all contentions whose formulation does not require access to SUNSI (+25 Answers to petition for intervention; +7 requestor/petitioner reply).
20	Nuclear Regulatory Commission (NRC) staff informs the requestor of the staff's determination whether the request for access provides a reasonable basis to believe standing can be established and shows need for SUNSI. (NRC staff also informs any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information.) If NRC staff makes the finding of need for SUNSI and likelihood of standing, NRC staff begins document processing (preparation of redactions or review of redacted documents).
25	If NRC staff finds no "need" or no likelihood of standing, the deadline for requestor/petitioner to file a motion seeking a ruling to reverse the NRC staff's denial of access; NRC staff files copy of access determination with the presiding officer (or Chief Administrative Judge or other designated officer, as appropriate). If NRC staff finds "need" for SUNSI, the deadline for any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information to file a motion seeking a ruling to reverse the NRC staff's grant of access.
30	Deadline for NRC staff reply to motions to reverse NRC staff determination(s).
40	(Receipt +30) If NRC staff finds standing and need for SUNSI, deadline for NRC staff to complete information processing and file motion for Protective Order and draft Non-Disclosure Affidavit. Deadline for applicant/licensee to file Non-Disclosure Agreement for SUNSI.

Day	Event/Activity
A	If access granted: Issuance of presiding officer or other designated officer decision on motion for protective order for access to sensitive information (including schedule for providing access and submission of contentions) or decision reversing a final adverse determination by the NRC staff.
A + 3	Deadline for filing executed Non-Disclosure Affidavits. Access provided to SUNSI consistent with decision issuing the protective order.
A + 28	Deadline for submission of contentions whose development depends upon access to SUNSI. However, if more than 25 days remain between the petitioner's receipt of (or access to) the information and the deadline for filing all other contentions (as established in the notice of hearing or opportunity for hearing), the petitioner may file its SUNSI contentions by that later deadline.
A + 53	(Contention receipt +25) Answers to contentions whose development depends upon access to SUNSI.
A + 60	(Answer receipt +7) Petitioner/Intervenor reply to answers.
>A + 60	Decision on contention admission.