

effects on the LOCA analysis. The result showed that the Byron Station ECCS Model Safety Analysis of Record remained bounding for those LTAs. The staff recognizes that the current LTAs will be located at non-limiting core locations, and the ZIRLO (LT-2) is very similar to the approved ZIRLO and the previously exempted ZIRLO (LT-1) in chemical composition and mechanical behavior. Accordingly, the currently approved methodology for analyzing ECCS performance is acceptable to apply for the low tin ZIRLO (LT-2) LTAs, as is further discussed below with respect to the Baker-Just equation. As also discussed below, results of comparative LOCA calculations with the same plant operating parameters will be performed in the reload analysis for Cycle 13 to verify that the current ECCS Model Safety Analysis of Record remains bounding for these four LTAs for Byron Station Unit 1 Cycle 13.

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 ZIRLO (LT-2) cladding for determining acceptable fuel performance. The underlying intent of this portion of the Appendix K, however, is to ensure that analysis of fuel response to LOCAs is conservatively calculated. Due to the similarities in the chemical composition of the ZIRLO (LT-2) and zircaloy, the application of the Baker-Just equation in the analysis of the improved ZIRLO (LT-2) clad fuel will conservatively bound all post-LOCA scenarios. Thus, application of appendix K, paragraph I.A.5, is not necessary for the licensee to achieve the underlying purpose of the rule in these circumstances.

According to the submittal, the licensee will perform reload analysis to demonstrate adequate ECCS performance, and show that the LTAs do not have a significant impact upon the analysis for Byron Station Unit 1. In the Cycle 13 reload analyses, the licensee will verify that the predicted peak cladding temperature of the LTAs are significantly lower than that predicted for the resident fuel. The licensee will also verify that the Baker-Just equation conservatively predicts local cladding oxidation of the LTAs of only a few percent. Also, the licensee will verify that maximum hydrogen generation is unchanged with the inclusion of the LTAs, and the coolable geometry is maintained following a

LOCA. As such, application of 10 CFR 50.46 and 10 CFR part 50, appendix K is not necessary to achieve their underlying purposes in these circumstances.

To summarize, based on the previously acceptable performance of the LTAs in Byron Station Units 1 and 2, the staff concludes that the licensee has demonstrated that the LTAs will perform adequately under LOCA conditions, and thus the LTAs are acceptable for operation in Byron Station Unit 1 Cycle 13.

Therefore, application of 10 CFR 50.44, 10 CFR 50.46, and appendix K to 10 CFR part 50 is not necessary to achieve their underlying purposes and that special circumstances are present. Thus, it is acceptable to grant an exemption, pursuant to 10 CFR 50.12(a)(2), from the requirements of 10 CFR 50.44, 10 CFR 50.46, and Appendix K to 10 CFR Part 50 for the irradiation of the lower tin ZIRLO (LT-2) clad fuel rods in Byron Station Unit 1 during Cycle 13.

#### 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 Exelon Generation Company, LLC, an exemption from the requirements of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR part 50, appendix K, for irradiation of low tin ZIRLO (LT-2) clad fuel rods in Byron Station Unit 1 during Cycle 13.

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 (68 FR 54246).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 22nd day of September, 2003.

For the Nuclear Regulatory Commission.

**Eric J. Leeds,**

*Deputy Director, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.*

[FR Doc. 03-24670 Filed 9-29-03; 8:45 am]

**BILLING CODE 7590-01-P**

## NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-338 and 50-339]

### Virginia Electric and Power Company, North Anna Power Station, Units 1 and 2; Exemption

#### 1.0 Background

The Virginia Electric and Power Company (the licensee) is the holder of Renewed Facility Operating License Nos. NPF-4 and NPF-7, which authorize operation of the North Anna Power Station, Units 1 and 2. The licenses provide, among other things, that the facilities are subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The North Anna units are pressurized-water reactors located in Louisa County in the Commonwealth of Virginia.

#### 2.0 Request/Action

Title 10 of the Code of Federal Regulations (10 CFR), Section 50.44, "Standard for Combustion Gas Control in Light-Water-Cooled Power Reactors," requires, in part, reactors fueled with Zircaloy or ZIRLO cladding to provide means to control any hydrogen gas that may be generated after a postulated loss-of-coolant accident (LOCA). 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors," requires that emergency core cooling systems (ECCSs) for reactors containing fuel with Zircaloy or ZIRLO fuel cladding material be designed such that their performance, as calculated as set forth in that section, meets specified acceptance criteria. Finally, 10 CFR Part 50, Appendix K, "ECCS Evaluation Models," 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 for reactors using Zircaloy fuel cladding.

By letter dated March 28, 2002, as supplemented by letters dated May 13, June 19, and November 15, 2002, and May 6, May 9, May 27, June 11 (2 letters), July 18, August 26, September 4, and September 5, 2003, the licensee requested an exemption from the requirements of 10 CFR 50.44 and 10 CFR 50.46 to use an advanced zirconium-based alloy, designated as M5, for the fuel cladding material instead of the ZIRLO or Zircaloy fuel cladding material specified in these regulations. The licensee's exemption request was submitted in conjunction

with an application for license amendments to use Framatome Advanced Mark-BW fuel containing M5 cladding material at North Anna, Units 1 and 2. The proposed amendment is currently under NRC staff review. Together, the exemption and amendments would allow Framatome Advanced Mark-BW fuel with M5 cladding to be used at North Anna, Units 1 and 2.

In addition, in accordance with 10 CFR 50.12(a), the NRC staff, upon its own initiative, has developed an exemption from the requirements of 10 CFR part 50, appendix K, with respect to the use of Framatome Advanced Mark-BW fuel containing M5 cladding at North Anna, Units 1 and 2. In its submittal dated March 28, 2002, the licensee indicated that an exemption from 10 CFR part 50, appendix K, was not necessary to use M5 fuel cladding since Framatome Advanced Nuclear Power (ANP) had demonstrated in the NRC staff-approved Topical Report BAW-10227P, "Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel," dated February 11, 2000, that the Baker-Just equation can be used to conservatively predict the metal-water reaction rates for M5 fuel cladding. However, after reviewing its Safety Evaluation Report (SER) dated February 4, 2000, for Topical Report BAW-10227P, the NRC staff has determined that an exemption from 10 CFR part 50, appendix K, was also needed in order to use M5 fuel cladding at North Anna, Units 1 and 2. The NRC staff's rationale for developing this exemption on its own initiative is explained in the following section.

### 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) special circumstances are present. In accordance with 10 CFR 50.12(a)(2)(ii), special circumstances exist whenever application of a particular regulation under the circumstances is not necessary to achieve the underlying purpose of the rule.

The licensee proposes to use M5 material for fuel rod cladding and fuel assembly structural tubing and grids at North Anna, Units 1 and 2. On February 4, 2000, the NRC staff approved Topical Report BAW-10227P. This topical report provided the basis for the use of Framatome ANP's M5 cladding and

structural material in pressurized-water reactor cores. In its SER dated February 4, 2000, for Topical Report BAW-10227P, the NRC staff concluded that M5 properties and the mechanical design methodology as defined in this topical report, "are in accordance with Standard Review Plan Section 4.2, 10 CFR 50.46, and 10 CFR part 50, appendix K, and therefore are acceptable for reload licensing applications up to rod average burnup levels of 62,000 MWd/MTU and 60,000 MWd/MTU for Mark B and Mark-BW fuel designs, respectively." The NRC staff's SER and the approved topical report were published on February 11, 2000, as Topical Report BAW-10227P-A. By letter dated March 28, 2002, the licensee presented a mixed core analysis methodology and a transition core penalty to account for the differences in the core geometry between the Mark-BW fuel and the Advanced Mark-BW fuel proposed for use at North Anna, Units 1 and 2. The NRC staff has determined that Topical Report BAW-10227P-A is applicable to the use of Advanced Mark-BW fuel at North Anna, Units 1 and 2, because the core geometrical differences are consistent with the range of conditions for which analyses of fuel performance are documented in the NRC staff-approved topical report regarding the use of M5 fuel cladding.

The underlying purpose of 10 CFR 50.44 is to ensure that means are provided for control of hydrogen gas following a LOCA. However, this rule applies only to reactors using Zircaloy or ZIRLO cladding. The licensee has provided means for controlling hydrogen gas and has previously considered the potential for hydrogen gas generation stemming from a metal-water reaction. Furthermore, in its NRC staff-approved Topical Report BAW-10227P-A, Appendix A, Framatome ANP demonstrated that M5 fuel cladding material is similar in chemical composition to Zircaloy cladding. Accordingly, this chemical similarity ensures that the previous calculations of hydrogen production resulting from metal-water reaction will not be significantly changed. As such, application of 10 CFR 50.44 is not necessary for the licensee to achieve its underlying purpose in these circumstances.

The underlying purpose of 10 CFR 50.46 is to ensure that facilities meet appropriate acceptance criteria for calculated ECCS performance. However, this rule applies only to reactors using Zircaloy or ZIRLO cladding. In its topical report, Framatome ANP demonstrated that ECCS acceptance

criteria are also applicable to reactors that use M5 fuel rod cladding and structural material. The NRC staff has determined that this finding is applicable to North Anna because the fuel designs are consistent with the range of conditions for which analyses of fuel performance are documented in the NRC staff-approved topical report. Thus, the performance of M5 material is similar to that of Zircaloy and ZIRLO fuel cladding, and application of the regulation (*i.e.*, using Zircaloy or ZIRLO) is not necessary to achieve the underlying purpose of 10 CFR 50.46.

In its submittal dated March 28, 2002, the licensee stated that Framatome ANP had conducted oxidation testing to demonstrate that the Baker-Just equation can be used to conservatively predict the metal-water reaction rates for M5 fuel cladding, and these test results had demonstrated that paragraph I.A.5 of 10 CFR part 50, appendix K, was applicable to M5. The licensee indicated that since these test results were documented in the NRC staff-approved Topical Report BAW-10227P-A, an exemption from the requirements of 10 CFR part 50, appendix K, was not necessary to use M5 fuel cladding. However, based upon the review of the NRC staff's SER for Topical Report BAW-10227P-A, the NRC staff has determined that an exemption from the requirements of 10 CFR part 50, appendix K, is necessary in order for the licensee to use M5 fuel cladding. In section 7.0 of the SER on Topical Report BAW-10227P-A, the NRC staff concluded that while it is appropriately conservative to apply the criteria of 10 CFR 50.46 and 10 CFR part 50, appendix K, to M5 fuel applications, the criteria in the SER are specifically identified for only Zircaloy fuel cladding material. Furthermore, as set forth in that SER, the NRC staff found that an exemption from the requirements of 10 CFR part 50, appendix K, must be obtained in order to use M5 fuel cladding. In short, as set forth in 10 CFR part 50, appendix K, I.A.5, the Baker-Just equation, by its terms, applies only to fuel cladding made of Zircaloy material. As a result, the NRC staff, upon its own initiative, developed an exemption from the requirements of 10 CFR part 50, appendix K, for the requested use of M5 fuel cladding at North Anna, Units 1 and 2.

The underlying purpose of 10 CFR part 50, appendix K, is to ensure that cladding oxidation and hydrogen generation are appropriately limited during a LOCA and conservatively accounted for in the ECCS evaluation model. This regulation sets forth

requirements for plants that use either Zircaloy or ZIRLO fuel cladding. Specifically, paragraph I.A.5 of 10 CFR part 50, appendix K, requires that the Baker-Just equation be used in the ECCS evaluation model to determine the rate of energy release, hydrogen generation, and cladding oxidation. This equation conservatively bounds all post-LOCA scenarios. In the SER that approved Topical Report BAW-10227P, the NRC staff concluded that the Baker-Just correlation is conservative for determining high temperature M5 oxidation for LOCA analysis, and that the correlation is acceptable for LOCA ECCS analysis up to the currently approved burn-up levels. The NRC staff has determined that this finding is applicable to North Anna because the fuel designs are consistent with the range of conditions for which analyses of fuel performance are documented in the NRC staff-approved topical report. Therefore, when M5 is used as fuel rod cladding and structural material, the Baker-Just correlation bounds post-LOCA scenarios, and ECCS evaluation model criteria will be met. Accordingly, application of the rule requirements to use Zircaloy or ZIRLO is not necessary to achieve the underlying purpose of 10 CFR part 50, appendix K.

#### 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. Based on the above, the Commission has determined that pursuant to 10 CFR 50.12(a)(2)(ii), special circumstances are present. Therefore, the Commission hereby grants the licensee an exemption from the requirements of 10 CFR 50.44, 10 CFR 50.46, and appendix K to 10 CFR part 50 for North Anna, Units 1 and 2, with respect to the use of fuel incorporating M5 material as cladding and structural material at North Anna, Units 1 and 2.

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 (68 FR 55070).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 23rd day of September, 2003.

For the Nuclear Regulatory Commission.  
**Eric J. Leeds,**  
*Acting Director, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.*

[FR Doc. 03-24669 Filed 9-29-03; 8:45 am]  
**BILLING CODE 7590-01-P**

## NUCLEAR REGULATORY COMMISSION

### Sunshine Act; Notice of Meeting

**AGENCY HOLDING THE MEETING:** Nuclear Regulatory Commission.

**DATE:** Weeks of September 29, October 6, 13, 20, 27, November 3, 2003.

**PLACE:** Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

**STATUS:** Public and Closed.

#### MATTERS TO BE CONSIDERED:

#### Week of September 29, 2003

*Thursday, October 2, 2003*

9:30 a.m. Meeting with Advisory Committee on Reactor Safeguards (ACRS) (Public Meeting) (Contact: John Larkins, 301-415-7360)

This meeting will be Webcast live at the Web address—<http://www.nrc.gov>.

#### Week of October 6, 2003—Tentative

*Tuesday, October 7, 2003*

9:30 a.m. Briefing on Decommissioning Activities and Status (Public Meeting) (Contact: Claudia Craig, 301-415-7276)

This meeting will be Webcast live at the Web address—<http://www.nrc.gov>.

1:30 p.m. Briefing on Strategic Workforce Planning and Human Capital Initiatives (Closed—Ex. 2)

#### Week of October 13, 2003—Tentative

*Wednesday, October 15, 2003*

1:30 p.m. Briefing on License Renewal Program, Power Uprate Activities, and High Priority Activities (Public Meeting) (Contact: Jimi Yerokun, 301-415-2292)

This meeting will be Webcast live at the Web address—<http://www.nrc.gov>.

#### Week of October 20, 2003—Tentative

*Thursday, October 23, 2003*

10 a.m. Meeting with Advisory Committee on Nuclear Waste (ACNW) (Public Meeting) (Contact: John Larkins, 301-415-7360)

This meeting will be Webcast live at the Web address—<http://www.nrc.gov>.

#### Week of October 27, 2003—Tentative

*Wednesday, October 29, 2003*

9:30 a.m. Discussion of Security Issues (Closed—Ex. 1)

#### Week of November 3, 2003—Tentative

There are no meetings scheduled for the Week of November 3, 2003.

The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings call (recording)—(301) 415-1292. Contact person for more information: David Louis Gamberoni (301) 415-1651.

*Additional Information:* By a vote of 3-0 on September 17 and 22, the Commission determined pursuant to U.S.C. 552b(e) and § 9.107(a) of the Commission's rules that "Discussion of Intragovernmental Issues (Closed—Ex. 9)" be held September 22, and on less than one week's notice to the public.

The NRC Commission Meeting Schedule can be found on the Internet at: <http://www.nrc.gov/what-we-do/policy-making/schedule.html>.

This notice is distributed by mail to several hundred subscribers; if you no longer wish to receive it, or would like to be added to the distribution, please contact the Office of the Secretary, Washington, DC 20555 (301-415-1969). In addition, distribution of this meeting notice over the Internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to [dkw@nrc.gov](mailto:dkw@nrc.gov).

Dated: September 25, 2003.

**D.L. Gamberoni,**  
*Technical Coordinator, Office of the Secretary.*

[FR Doc. 03-24843 Filed 9-26-03; 10:07 am]  
**BILLING CODE 7590-01-M**

## NUCLEAR REGULATORY COMMISSION

### Biweekly Notice; Applications and Amendments to Facility Operating Licenses Involving No Significant Hazards Considerations

#### I. Background

Pursuant to Public Law 97-415, the U.S. Nuclear Regulatory Commission (the Commission or NRC staff) is publishing this regular biweekly notice. Public Law 97-415 revised section 189 of the Atomic Energy Act of 1954, as amended (the Act), to require the Commission to publish notice of any amendments issued, or proposed to be issued, under a new provision of section 189 of the Act. This provision grants the Commission the authority to issue and make immediately effective any