NUCLEAR REGULATORY COMMISSION

[Docket No. 52–017; NRC–2008–0066]

Virginia Electric and Power Company D/B/A Dominion Virginia Power and Old Dominion Electric Cooperative; Combined License Application for North Anna Unit 3; Exemption

1.0 Background

Virginia Electric and Power Company, doing business as Dominion Virginia Power (Dominion), acting on its own behalf and as agent for Old Dominion Electric Cooperative (ODEC), submitted to the U.S. Nuclear Regulatory Commission (NRC) a combined license (COL) application, under Title 10 of the Code of Federal Regulations (10 CFR), Subpart C of Part 52, for an Economic Simplified Boiling Water Reactor (ESBWR), to be designated as North Anna Unit 3, at the North Anna Power Station site located in Louisa County, VA. The NRC docketed the application on January 28, 2008, and is currently performing a detailed review of the application. In addition, the NRC is currently performing a detailed review of the GE Hitachi Nuclear Energy application for design certification of the Economic Simplified Boiling Water Reactor (ESBWR).

2.0 Request/Action

10 CFR 50.71(e)(3)(iii) requires that applicants for a combined license under 10 CFR Part 52 shall, during the period from docketing of a COL application until the Commission makes a finding under 10 CFR 52.103(g) pertaining to facility operation, submit an annual update to the application’s final safety analysis report (FSAR), which is a part of the application.

Dominion has requested a one-time exemption from the requirements of 10 CFR 50.71(e)(3)(iii) to allow submittal of the FSAR update, scheduled for December 2009, by June 30, 2010, and submittal of the subsequent FSAR update in 2011.

In summary, the requested exemption is a one-time schedule change from the requirements of 10 CFR 50.71(e)(3)(iii). The exemption would allow the applicant to submit the FSAR update scheduled for 2009 by June 30, 2010, and to submit the subsequent FSAR update in 2011. The FSAR update schedule could not be changed absent the exemption. Dominion requested the exemption by letter dated November 17, 2009, under the Nuclear Notes/Access and Management System (ADAMS) Accession No. ML093240090.

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, including Section 50.71(e)(3)(iii) 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. As relevant to the requested exemption, special circumstances exist if (1) "Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated" (10 CFR 50.12(a)(2)(ii)) or (2) "The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation." (10 CFR 50.12(a)(2)(v)).

The regulations at 10 CFR 50.71(e)(3)(iii), requiring annual FSAR update, did not contemplate a situation in which a design control document (DCD) referenced in a COL application FSAR was revised shortly before the annual FSAR update was due. The ESBWR, referenced in the North Anna Unit 3 COL application, is currently undergoing NRC review, and Revision 6 of the FSAR, which is a comprehensive revision, was submitted to the NRC on August 31, 2009. Consistent with the regulations at 10 CFR 50.71(e), the COL FSAR update shall contain information to reflect all changes since the previous FSAR update. For North Anna, the FSAR update is to include the effects of all changes contained in DCD Revision 6. The overall quantity and nature of changes in ESBWR FSAR Revision 6 was extensive. Some changes in Revision 6 call for detailed analyses and extensive engineering work, including that of vendors, to be performed prior to the COL FSAR update. Completing all prerequisite activities and preparing the North Anna FSAR update by December 2009, would present a considerable and undue burden.

The requested one-time exemption to incorporate ESBWR FSAR Revision 6 into the North Anna FSAR update would provide only temporary relief from the regulations at 10 CFR 50.71(e)(3)(iii). The applicant has made good faith efforts to comply with 10 CFR 50.71(e)(3)(iii) by incorporating ESBWR FSAR Revision 5 into the prior North Anna FSAR update and by providing, on an on-going basis, marked-up COL FSAR pages to incorporate changes associated with responses to NRC requests for additional information.

Authorized by Law

The exemption is a one-time schedule exemption from the requirements of 10 CFR 50.71(e)(3)(iii). The exemption would allow the applicant to submit the North Anna FSAR annual update scheduled for 2009 by June 30, 2010, and to submit the subsequent FSAR annual update in 2011. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR 50.71(e)(3)(iii). The NRC staff has determined that granting of the requested exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission’s regulations. Therefore, the exemption is authorized by law.

No Undue Risk to Public Health and Safety

The underlying purpose of 10 CFR 50.71(e)(3)(iii) is to provide for timely, comprehensive updates of the FSAR associated with a COL application in order to support an effective and efficient review by NRC staff and issuance of the staff’s safety evaluation report. The requested exemption is solely administrative in nature in that it pertains to the schedule for submittal to the NRC of revisions to an application under 10 CFR Part 52 for which a license has not been granted.

Based on the above, no new accident precursors are created by the exemption; thus, the probability of postulated accidents is not increased. Also, based on the above, the consequences of postulated accidents are not increased. Therefore, there is no undue risk to public health and safety.

Consistent With Common Defense and Security

The requested exemption would allow the applicant to submit the FSAR annual update scheduled for 2009 by June 30, 2010, and to submit the subsequent FSAR update in 2011. This schedule 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(a)(2), are present whenever (1) “Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.” (10 CFR...
NUCLEAR REGULATORY COMMISSION

[NRC–2009–0399; Docket No. 50–263]

Northern States Power Company, LLC; Monticello Nuclear Generating Plant Final Environmental Assessment and Finding of No Significant Impact

The Nuclear Regulatory Commission (NRC) has prepared a final Environmental Assessment (EA) as part of its evaluation of a request by Northern States Power Company (NSP) for a license amendment to increase the maximum thermal power at the Monticello Nuclear Generating Plant (MNGP) from 1,775 megawatts thermal (MWt) to 2,004 MWt. This represents a power increase of approximately 13 percent over the current licensed thermal power. As stated in the NRC staff’s position paper dated February 8, 1996, on the Boiling-Water Reactor Extended Power Uprate (EPU) Program, the NRC staff will prepare an environmental impact statement if it believes a power uprate would have a significant impact on the human environment. The NRC published a draft EA and finding of no significant impact on the proposed action for public comment in the Federal Register on September 15, 2009 (74 FR 47281). No comments were received on the draft EA. The NRC staff did not identify any significant impact from the information provided in the licensee’s EPU application for MNGP or during the NRC staff’s review of other available information; therefore, the NRC staff is documenting its environmental review in this final EA.

Environmental Assessment

Plant Site and Environments

The MNGP site is located in Monticello, Minnesota, along the southern bank of the Mississippi River at River Mile (RM) 900, approximately 30 miles (48 kilometers) northwest of Minneapolis/St. Paul, and east of Interstate Highway 94. The 2,150-acre (870-hectare) site consists of 2 miles (3 kilometers) of frontage on both banks of the Mississippi River, within portions of Wright and Sherburne Counties. The plant and its supporting facilities occupy approximately 50 acres (20 hectares) in Wright County.

MNGP is a single-unit boiling water reactor that has been designed to allow operation using four water circulating modes to cool the system, and draws water from and discharges water to the Mississippi River. These four water circulating modes include an open-cycle (once-through) system, a closed cycle system using two mechanical draft cooling towers, a helper cycle system, and a partial recirculation of the cooling water. The helper cycle cools water using both the open cycle to withdraw water from and discharge the water back to the Mississippi River, and the cooling towers to cool water prior to discharge to the river. The helper cycle is used when the discharge canal temperature approaches permit limits and upstream river temperatures are consistently at or above 68 °F. MNGP operates in open cycle or helper cycle approximately 98 percent of the time. In the partial recirculation mode, 75 percent of the Mississippi River flow is withdrawn and the cooling towers are operating. A portion of the cooled water is recirculated to the intake and the remainder is discharged to the river. The partial recirculation mode is used when river flow is less than 860 cubic-feet-per-second (cfs) but greater than 240 cfs, and the river temperature is elevated.

Identification of the Proposed Action

By application dated November 5, 2008, as supplemented on January 29, 2009 (on environmental issues only) the licensee requested an amendment for an EPU for MNGP to increase the licensed thermal power level from 1,775 MWt to 2,004 MWt, which is an increase of 13 percent over the current licensed thermal power and a 20 percent increase over the original licensed thermal power. The Atomic Energy Commission (predecessor of the NRC) issued the Final Environmental Statement (FES) in November 1972, for the original license for MNGP. The NRC previously approved a 6.3 percent stretch power uprate in September 1998, increasing the power output from 1,670 MWt to 1,775 MWt. The NRC EA for that action resulted in a finding of no significant impact and was published in the Federal Register on September 1, 1998 (63 FR 46489). In addition, the NRC issued a Supplemental Environmental Impact Statement, NUREG–1437, Supplement 26 (SEIS–26) in August 2006, associated with renewing the operating license for MNGP for an additional 20 years. This proposed amendment for an EPU would result in an increase in production of electricity and the amount of waste heat delivered to the condenser, requiring an increase to the amount of water withdrawn from the Mississippi River for cooling purposes, and a subsequent increase in the temperature of the water discharged back to the Mississippi River.

The licensee plans to implement the proposed EPU in two phases to coincide with two refueling outages. The first