NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–266 and 50–301]

In the Matter of Wisconsin Electric Power Company (Point Beach Nuclear Plant, Unit Nos. 1 and 2); Exemption

I

Wisconsin Electric Power Company (the licensee) is the holder of Facility Operating License Nos. DPR–24 and DPR–27, which authorize operation of the Point Beach Nuclear Plant, Units 1 and 2, respectively. The licenses provide, among other things, that the licensee is subject to all rules, regulations, and orders of the Commission now or hereafter in effect.

The facility consists of two pressurized-water reactors located at the licensee's site in Manitowoc County, Wisconsin.

II

The Code of Federal Regulations at 10 CFR 50.48, ''Fire Protection,'' requires that nuclear power plants licensed to operate prior to January 1, 1979, meet Appendix R, ''Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979,'' Sections III.G, III.J, and III.O. Appendix R, Section III.J, ''Emergency Lighting,'' requires that ''Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.'' Equipment needed for safe shutdown after a fire at Point Beach Nuclear Plant is maintained inside the main power block and several buildings onsite. Emergency lighting is provided inside these buildings for areas needed for operation of safe shutdown equipment and for access and egress routes in accordance with 10 CFR part 50, Appendix R, Section III.J. However, no emergency lighting meeting Section III.J requirements has been installed for outdoor routes between these buildings. Because of cost and maintenance considerations, and after determining that application of Section III.J was not necessary to achieve the underlying purpose of the rule, the licensee submitted an exemption request with respect to these outdoor routes.

The requested exemption from the requirements of Appendix R, Section III.J, would allow the use of hand-held portable lights, in the event that sufficient daylight, normal lighting, or security lighting is not available, when transiting (access and egress routes) between the main power block and buildings separated from the main power block, namely, the diesel generator building (G–03 and G–04), 13.8 kV switchgear building, service water and fire pump house, fuel oil pump house, gas turbine building, and warehouse 3. These buildings contain equipment relied upon in the detailed fire plans to mitigate the consequences of a fire that could affect the capability to place the reactor in cold shutdown. As stated above, emergency lighting is maintained within these structures as required by Appendix R, Section III.J. However, access and egress between these buildings and the main power block require walking outdoors. The areas outside of and between these buildings are paved, commonly used for vehicular traffic, and are maintained clear of snow and other obstructions.

In the worst-case scenarios that postulate a fire concurrent with a loss of offsite power, the hand-held, battery-powered, portable lighting units currently maintained on site in four ''abnormal operating procedure'' (AOP) packs located in the control room and additional hand-held, battery-powered, portable lighting units maintained by operations personnel would be used, under the proposed exemption, by the operations staff to allow transit between buildings to safely perform the functions required by the fire plans and operations procedures. Each of the four AOP packs contain a hand-held, battery-powered, portable lighting unit in addition to tools. Each hand-held, battery-powered, portable lighting unit is verified to be operable in a monthly surveillance and the batteries are replaced every 6 months.

III

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 the public health or safety, and are consistent with the common defense and security, and (2) when special circumstances are present. Special circumstances are present whenever, according to 10 CFR 50.12(a)(2)(ii), ''Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.''

The underlying purpose of 10 CFR part 50, Appendix R, Section III.J, is to provide adequate illumination to assure the capability of performing all necessary safe shutdown functions, as well as to assure personnel movement to and from the equipment and components that must be manually operated by plant personnel to effect safe shutdown during emergencies. In addition, the illumination must have a capability to allow sufficient time for normal lighting to be restored.

To achieve safe shutdown during a plant emergency, personnel may be required to go to and from buildings outside the main power block to control equipment locally, monitor equipment status, or obtain equipment, such as fans or repair materials. Any equipment that would need to be obtained could be carried with one hand or, if necessary, transported on wheeled carts. In the latter case, a minimum of two individuals would be available, one of whom could provide the necessary lighting if needed.

The availability of hand-held, battery-powered portable lights would serve the underlying purpose of the rule with respect to transit between the main power block and the separate buildings identified above, in that the use of such hand-held lights would provide adequate illumination to permit access to and egress from buildings containing safe shutdown equipment and components, yet would not significantly hinder the transportation of equipment if such is necessary during a plant emergency. In addition, such hand-held lights would be available for use during an 8-hour period contemplated by the regulation.

On the basis of its evaluation, the staff concludes that with the availability of hand-held battery-powered portable lights for use during transit between site structures described above, the installation of emergency lighting units with at least an 8-hour battery power supply for these transit routes is not necessary to achieve the underlying purpose of Section III.J of Appendix R to 10 CFR part 50. The licensee's request for an exemption from the requirements of Section III.J to 10 CFR part 50 to allow the use of alternative means of lighting for access and egress routes between the main power block and the diesel generator building, 13.8 kV switchgear building, service water and fire pump house, fuel oil pump house, gas turbine building, and warehouse 3 is acceptable to the staff.

IV

Accordingly, the Commission has determined, pursuant to 10 CFR 50.12, that this 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. The Commission further determines that special circumstances as provided in 10 CFR 50.12(a)(2)(ii) are

present in that application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule.

Therefore, the Commission hereby grants the Wisconsin Electric Power Company an exemption from the requirements of 10 CFR part 50, Appendix R, Section III.J, with respect to access and egress routes between the main power block and the diesel generator building, 13.8 kV switchgear building, service water and fire pump house, fuel oil pump house, gas turbine building, and warehouse 3 at Point Beach Nuclear Plant, Units 1 and 2, to the extent alternative means of lighting as described herein are available.

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 (62 FR 46381).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 7th day of April 1998.

For The Nuclear Regulatory Commission.

Samuel J. Collins,

Director, Office of Nuclear Reactor Regulation.

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NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–317 and 50–318]

Baltimore Gas and Electric Company; Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating Licenses Nos. DPR–53 and DPR–69, issued to Baltimore Gas and Electric Company (the licensee), for operation of the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, located in Calvert County, Maryland.

Environmental Assessment

Identification of the Proposed Action

The proposed action would revise the Technical Specifications (TSs) to reduce the minimum Reactor Coolant System (RCS) total flow rate from 370,000 gpm to 340,000 gpm; reduce the Reactor Protective Instrumentation trip setpoint for Reactor Coolant Flow—Low from greater than or equal to 95% to greater than or equal to 92% of design reactor coolant flow; adjust the reactor core thermal margin safety limit lines to reflect the reduced RCS flow rate; and reduce the lift setting range for the eight Main Steam Safety Valves (MSSVs) with the highest allowable lift setting from the current range of 935 to 1065 psig to a more restrictive range of 935 to 1050 psig. In addition to the changes to the TSs necessary to support an increased number of plugged steam generator tubes, reanalysis of the accident analyses affected by this change identified an Unreviewed Safety Question (USQ) associated with these changes. The USQ results from the determination that the Seized Rotor Event analysis involves an increased percentage of failed fuel cladding. Finally, four reanalyzed events Main Steamline Break (MSLB), Steam Generator Tube Rupture (SGTR) Loss of Coolant Flow, and Boron Dilution) require Nuclear Regulatory Commission approval due to changes to the methodology or assumptions used to analyze these events.

The proposed action is in accordance with the licensee's application for amendment dated January 31, 1997, as supplemented by letters dated February 13, February 28, March 25, April 16, August 16, and September 29, 1997, and January 22, March 17, April 8, and April 21, 1998.

The Need for the Proposed Action

During the 1998 Unit 1 refueling outage, Baltimore Gas and Electric Company (BGE) will perform extensive steam generator tube inspections. Tubes that experience excessive degradation reduce the integrity of the primary-to-secondary pressure boundary. Eddy current examination is used to measure the extent of tube degradation. When the reduction in the tube wall thickness reaches the plugging or repair limit, as specified in the Technical Specifications, the tube is considered defective and a corrective action is taken.

Currently, the Calvert Cliffs TSs allow defective tubes to be plugged and removed from service, or to be repaired using welded sleeving techniques developed by Westinghouse Electric Corporation or Combustion Engineering, Inc. The most widely used tube maintenance technique at many pressurized water reactors, including Calvert Cliffs, is removal of the degraded tube from service by installing plugs at both ends of the tube. The installation of steam generator tube plugs removes the heat transfer surface of the plugged tube from service, and the increased flow resistance leads to a reduction in the primary coolant flow available for core cooling. The minimum primary coolant flow requirements in the TSs are based upon operation with no more than 800 plugged tubes in each steam generator. There is a possibility that the results of steam generator tube inspections in the upcoming refueling outage will necessitate exceeding the 800 plugged tube criteria in at least one of the Unit 1 steam generators. If this is the case, BGE will require implementation of the proposed TSs changes and approval of the USQ prior to Mode 2 entry following the 1998 Unit 1 refueling outage.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed action and concludes that the proposed action will not have a significant effect on the quality of the human environment. To the extent there is any environmental impact from increasing the number of plugged steam generator tubes, such impact results from the increased RCS temperature and the reduced RCS flow rate expected to result from this activity. Reanalysis of the Seized Rotor Event analyses has indicated a greater percentage of fuel pin failures would be expected during these postulated accidents due to the revised coolant temperature and flow rates; the increased number of plugged tubes results in an increase in offsite releases, relative to past analyses.

The licensee's results of the MSLB event reanalysis with reduced RCS flow indicate a reduction in the 0–2 hour thyroid dose at the Exclusion Area Boundary (EAB) from 81 rem to 5 rem, and a decrease in the 0–2 hour whole body dose at the EAB from 0.3 rem to 0.2 rem. The licensee's results of the Seized Rotor Event reanalysis indicate the resultant 0–2 hour EAB thyroid dose increases from 3.6 rem to 12 rem, whereas the whole body dose at the EAB is reduced from 0.4 rem to 0.2 rem. The licensee presented, for the first time, doses at the low population zone (LPZ) for the MSLB and the Seized Rotor Events. These doses were 1.2 rem thyroid and 0.04 rem whole body for the MSLB and 1.0 rem thyroid and 0.04 rem whole body for the Seized Rotor Event. The guideline dose limits for accidents involving fuel failure are the 10 CFR Part 100 limits of 300 rem to the thyroid and 25 rem to the whole body.

The licensee presented the results of an SGTR analysis. Two cases were presented. The first case was based upon primary coolant being at the 100 hour technical specification value for dose equivalent ^{131}I of 1 μCI/g and iodine spiking factor of 500. The