

inadvertent HPI into the RCS during LTOP conditions, and

(3) Require the Core Flood Tank (CFT) pressure to be maintained within maximum allowable RCS P/T when CFT isolation valves are open, or these valves are closed to prevent inadvertent CFT injection into the RCS.

The licensee stated that these administrative controls will remain in effect until the TS are revised to include LTOP features addressing the full range of RCS pressures.

IV

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when (1) The exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security and (2) when special circumstances are present. 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 50.60, Appendix G, is to establish fracture toughness requirements for ferritic materials of pressure-retaining components of the reactor coolant pressure boundary to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences, to which the pressure boundary may be subjected over its service lifetime. Section IV.A.2 of this appendix requires that the reactor vessel be operated with P/T limits at least as conservative as those obtained by following the methods of analysis and the required margins of safety of Appendix G of the ASME Code, Section XI.

Appendix G of Section XI of the ASME Code requires that the P/T limits be calculated (a) using a safety factor of 2 on the principal membrane (pressure) stresses, (b) assuming a flaw at the surface with a depth of one-quarter ($\frac{1}{4}$) of the vessel wall thickness and a length of 6 times its depth, and (c) using a conservative fracture toughness curve that is based on the lower bound of static, dynamic, and crack arrest fracture toughness tests on material similar to the Point Beach reactor vessel material.

In determining the setpoint for LTOP events, the licensee proposed to use safety margins based on an alternate methodology consistent with the ASME Code Case N-514 guidelines. The ASME

Code Case N-514 allows determination of the setpoint for LTOP events such that the maximum pressure in the vessel would not exceed 110 percent of the P/T limits of the existing ASME Code, Section XI, Appendix G. This approach results in a safety factor of 1.8 on pressure. All other factors, including assumed flaw size and fracture toughness, remain the same. Although this methodology would reduce the safety factor on pressure, the margin with respect to toughness for LTOP transients are acceptable. Thus, applying Code Case N-514 will satisfy the underlying purpose of 10 CFR 50.60 for fracture toughness requirements. Further, by relieving the operational restrictions, the potential for undesirable lifting of the PORV would be reduced, thereby improving plant safety.

V

For the foregoing reasons, the NRC staff has concluded that the licensee's proposed use of the alternate methodology in determining the acceptable setpoint for LTOP events will not present an undue risk to public health and safety and is consistent with the common defense and security. The NRC staff has determined that there are special circumstances present, as specified in 10 CFR 50.12(a)(2)(ii), in that application of 10 CFR 50.60 is not necessary in order to achieve the underlying purpose of this regulation.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), an exemption is authorized by law, will not endanger life or property or common defense and security, and is otherwise in the public interest. Therefore, the Commission hereby grants an exemption from the requirements of 10 CFR 50.60 such that in determining the setpoint for LTOP events, the Appendix G curves for P/T limits are not exceeded by more than 10 percent.

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 28907).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 3rd day of July 1997.

For the Nuclear Regulatory Commission.

Samuel J. Collins,

Director, Office of Nuclear Reactor Regulation.

[FR Doc. 97-18211 Filed 7-10-97; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-289]

In the Matter of GPU Nuclear Corporation (Three Mile Island Nuclear Generating Station, Unit 1); Exemption

I

The GPU Nuclear Corporation (the licensee) is the holder of Facility Operating License No. DPR-50, which authorizes operation of the Three Mile Island Nuclear Generating Station, Unit 1 (TMI-1). The license provides that the licensee is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility consists of a pressurized-water reactor at the licensee's site located in Dauphin County, Pennsylvania.

II

The Code of Federal Regulations at 10 CFR 70.24, "Criticality Accident Requirements," requires that each licensee authorized to possess special nuclear material shall maintain a criticality accident monitoring system in each area where such material is handled, used, or stored. Subsection (a)(2) of 10 CFR 70.24 specifies detection and sensitivity requirements that these monitors must meet. Subsection (a)(1) also specifies that all areas subject to criticality accident monitoring must be covered by two detectors. Subsection (a)(3) of 10 CFR 70.24 requires licensees to maintain emergency procedures for each area in which this licensed special nuclear material is handled, used, or stored and provides (1) that the procedures ensure that all personnel withdraw to an area of safety upon the sounding of a criticality accident monitor alarm, (2) that the procedures must include drills to familiarize personnel with the evacuation plan, and (3) that the procedures designate responsible individuals for determining the cause of the alarm and placement of radiation survey instruments in accessible locations for use in such an emergency. Subsection (d) of 10 CFR 70.24 states that any licensee who believes that there is good cause why it should be granted an exemption from all or part of 10 CFR 70.24 may apply to the Commission for such an exemption and shall specify the reasons for the relief requested.

III

By letter dated February 7, 1997, as supplemented March 26 and June 5, 1997, GPU Nuclear Corporation

requested an exemption from 10 CFR 70.24(a). The Commission technical staff has reviewed the licensee's submittal and has determined that inadvertent criticality is not likely to occur in special nuclear materials handling or storage areas at TMI-1. The quantity of special nuclear material other than fuel that is stored on site is small enough to preclude achieving a critical mass.

The purpose of the criticality monitors required by 10 CFR 70.24 is to ensure that if a criticality were to occur during the handling of special nuclear material, personnel would be alerted to that fact and would take appropriate action. Although the staff has determined that such an accident is not likely to occur, the licensee has radiation monitors, as required by General Design Criterion 63, in fuel storage and handling areas. These monitors will alert personnel to excessive radiation levels and allow them to initiate appropriate safety actions. The low probability of an inadvertent criticality together with the licensee's adherence to General Design Criterion 63 constitute good cause for granting an exemption to the requirements of 10 CFR 70.24(a).

IV

The Commission has determined that, pursuant to 10 CFR 70.14, this exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest; therefore, the Commission hereby grants the following exemption:

The GPU Nuclear Corporation is exempt from the requirements of 10 CFR 70.24(a) for TMI-1.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact on the quality of the human environment (62 FR 36084).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 3rd day of July 1997.

For the Nuclear Regulatory Commission.

Frank J. Miraglia,

Acting Director, Office of Nuclear Reactor Regulation.

[FR Doc. 97-18210 Filed 7-10-97; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-309]

Maine Yankee Atomic Power Company, Maine Yankee Atomic Power Station; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of its regulations for Facility Operating License No. DPR-36 issued to Maine Yankee Atomic Power Company (the licensee), for operation of the Maine Yankee Atomic Power Station located in Lincoln County, Maine.

Environmental Assessment

Identification of Proposed Action

The proposed action would exempt Maine Yankee Atomic Power Company from the requirements of 10 CFR 70.24(a), which requires a monitoring system that will energize clearly audible alarms if accidental criticality occurs in each area in which special nuclear material is handled, used, or stored. The proposed action would also exempt the licensee from the requirements to maintain emergency procedures for each area in which special nuclear material is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon the sounding of the alarm, to familiarize personnel with the evacuation plan, and to designate responsible individuals for determining the cause of the alarm, and to place radiation survey instruments in accessible locations for use in such an emergency.

The proposed action is in accordance with the licensee's application for exemption dated December 19, 1996.

The Need for the Proposed Action

The purpose of 10 CFR 70.24 is to ensure that if a criticality were to occur during the handling of special nuclear material, personnel would be alerted to that fact and would take appropriate action. At a commercial nuclear power plant the inadvertent criticality with which 10 CFR 70.24 is concerned could occur during fuel handling operations. The special nuclear material that could be assembled into a critical mass at a commercial nuclear power plant is in the form of nuclear fuel. The quantity of other forms of special nuclear material that is stored on site is small enough to preclude achieving a critical mass. Because the fuel is not enriched beyond 5.0 weight percent Uranium-235 and because commercial nuclear plant

licensees have procedures and design features to prevent inadvertent criticality, the staff has determined that an inadvertent criticality would not likely occur due to the handling of special nuclear material at a commercial power reactor. The requirements of 10 CFR 70.24(a), therefore, are not necessary to ensure the safety of personnel during the handling of special nuclear materials at commercial power reactors.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed action and concludes that there is no significant environmental impact if the exemption is granted. Inadvertent or accidental criticality will be precluded through compliance with the Maine Yankee Atomic Power Station Technical Specifications, the design of the fuel storage racks providing geometric spacing of fuel assemblies in their storage locations, and administrative controls imposed on fuel handling procedures. Technical Specifications requirements specify reactivity limits for the fuel storage racks and minimum spacing between the fuel assemblies in the storage racks.

Appendix A of 10 CFR Part 50, "General Design Criteria for Nuclear Power Plants," Criterion 62, requires that criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations. This is met at Maine Yankee, as identified in the Technical Specifications and the Updated Final Safety Analysis Report (UFSAR). Maine Yankee Technical Specifications, Section 1.1, Fuel Storage, requires that fuel shall be stored in vertical racks that are designed to maintain fuel assembly center-to-center distances that will assure K-effective is less than or equal to 0.95 even with the pool filled with unborated water. The Technical Specification places limitations on the storage arrangements of fuel assemblies within certain regions of the spent fuel pool based on the nominal initial enrichment and the average burnup experienced by the assembly. Section 3.4.9, Criticality of Fuel Assemblies, of the UFSAR provides a description of the methods used by the licensee to preclude criticality of fuel assemblies outside the reactor. Section 5.2, Fuel Building, of the UFSAR provides a physical description of the licensee's new-fuel storage building, spent fuel pool and associated fuel handling equipment.