METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER AND LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

GPU NUCLEAR

THREE MILE ISLAND NUCLEAR STATION UNIT II

Operating Licensing No. DPR-73
Docket No. 50-320
Technical Specification Change Request No. 68 and
Recovery Operations Plan Change Request No. 47

The Technical Specification Change Request and Recovery Operations Plan Change Request are submitted in support of Licensee's request to change Operating License No. DPR-73 for Three Mile Island Nuclear Station Unit 2. As a part of this request, proposed replacement pages are also included.

GPU NUCLEAR

By Robert L Long
Director, Corporate Services/TMI-2

Sworn and subscribed to me this 1st day of AUGUST, 1991.

Melody Kim Kulp
Notary Public

Notarial Seal
Melody Kim Kulp, Notary Public
Londonderry Twp., Dauphin County
My Commission Expires Aug. 21, 1993
Member, Pennsylvania Association of Notaries

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

DOCKET NO. 50-320
LICENSE NO. DPR-73

GPU NUCLEAR CORPORATION

This is to certify that a copy of Technical Specification Change Request No. 68 and Recovery Operations Plan Change Request No. 47 to Operating License DPR-73 for Three Mile Island Nuclear Station Unit 2 has been filed with the U.S. Nuclear Regulatory Commission and served to the chief executives of 1) Londonderry Township, Dauphin County, Pennsylvania; 2) Dauphin County, Pennsylvania; and 3) the designated official of the Commonwealth of Pennsylvania by deposit in the United States mail, addressed as follows:

Mr. Jay H. Kopp, Chairman
Board of Supervisors of
Londonderry Township
R. D. #1, Geyers Church Road
Middletown, PA 17057

Ms. Sally Klein, Chairperson
Board of County Commissioners
of Dauphin County
Dauphin County Court House
Harrisburg, PA 17120

Mr. Thomas M. Gerusky, Director
Bureau of Radiation Protection
PA Dept. of Environmental Resources
P. O. Box 2063
Harrisburg, PA 17120

GPU NUCLEAR

By _____
Director Corporate Services/TMI-2

August 1, 1991
Date

Three Mile Island, Unit 2 (TMI-2)
Operating License DPR-73
Docket No. 50-320

Technical Specification Change Request (TSCR) No. 68 and Recovery Operations Plan Change Request (ROPCR) No. 47

The licensee requests that the attached changed pages of the Appendix A Technical Specifications (Tech. Specs.) (i.e., pages ii, 1-6, 3.9-3, 3.9-4, B3/4 9-1, B3/4 9-2, and 6-11) and Recovery Operations Plan (ROP) (i.e., pages ii, 4.3-5, 4.3-7a, and 4.9-4) replace the corresponding pages in the Tech. Specs. and the ROP.

Description of Change

The proposal revises the TMI-2 Tech. Specs. as follows : a) adds a definition for "Base Case Water" (i.e., Tech. Spec. 1.22); b) revises current Tech. Spec. 3.9.13 and Tech. Spec. Basis 3/4.9.13, "Accident Generated Water," to specify operating limits consistent with commitments in current licensing documents (References 1 through 3) and; c) deletes Tech. Spec. 6.8.3.1.d based on the proposed change to Tech. Spec. 3.9.13. Additionally, a change to the ROP is proposed that: a) provides a surveillance requirement (i.e., ROP Section 4.9.13) for operation of the Processed Water Disposal System (PWDS); and b) revises Table 4.3-3 to add the PWDS Vaporizer Radiation Monitor (PWD-RML-1).

Reason for Change

The proposed change is intended to specify Tech. Spec. requirements for processing of Accident Generated Water (AGW) that are consistent with current licensing documents. This change is similar to other Tech. Spec. requirements in that system operating limits are specified in the Limiting Condition for Operation (LCO) with a corresponding Action Statement and Surveillance Requirements. The proposed change will provide further assurance that operation of the PWDS will comply with current licensing requirements. Additionally, the proposed change will simplify the reportability determination, per 10 CFR 50.73, for AGW operations.

Safety Evaluation Justifying Change

The PWDS releases radioactive material to the environment via the vaporizer. Specific limits have been established in Licensing Basis Documents (LBDs) for effluents from the vaporizer. These effluent limits are based on the activity levels of Base Case Water as defined in Supplement 2 to the Programmatic Environmental Impact Statement (PEIS)(NUREG-0683). References 1 and 3 state:

> "Since the PEIS analysis assumed processing 'Base Case' water with a vaporizer discharge to the atmosphere containing 0.1 percent of the radioactive particulate from the influent, the PEIS values for Base Case will be used as the system operating limit."

The proposed LCO for Tech. Spec. 3.9.13 reflects the operating limits for the PWDS established in current LBDs This LCO also ensures that effluents from the PWDS are within regulatory limits. Reference 1 states:

Safety Evaluation Justifying Change (Cont'd)

> "The activity releases occurring from evaporator discharge of 'Base Case' water result in releases that are a small fraction of the releases permitted by existing regulatory requirements for the operation of a nuclear power plant."

The primary control over environmental effluent is established by strict controls over the process influent. The body of water to be processed is isolated from all possible sources of contamination. The source tank is recirculated to assure homogeneity. The source tank and vaporizer feed are sampled periodically and analyzed for various radionuclides as described in the PWDS Technical Evaluation Report (TER) (Reference 3) which is referenced in proposed ROP Section 4.9.13.

Assurance that the effluents are within 0.1% of Base Case Water concentrations is also maintained by periodic sampling to verify that the required system Decontamination Factor (DF) is achieved. Boron analysis is used to calculate a 96-hour rolling average of the system DF. Pursuant to Reference 3, when operating the PWDS in the coupled mode, if the average system DF for any 96-hour period is less than 1000 or if a condition should exist that, in the judgement of the licensee, a 96-hour average DF of 1000 cannot be reestablished, releases to the environment shall be terminated. When operating the vaporizer in the decoupled mode, the vaporizer feed shall be 1/1000 of Base Case Water concentrations for all radionuclides except tritium.

Proposed ROP Section 4.9.13 specifies that sampling and analysis be conducted in accordance with Section 3.5, "Sampling and Analysis Program," of the NRC approved PWDS TER which provides assurance that environmental discharges from the PWDS are within specified limits. The proposal also adds the PWDS Vaporizer Radiation Monitor (PWD-RML-1) to Table 4.3-3 of the ROP, which identifies other significant TMI-2 radiation monitors. The proposed surveillance requirements for this monitor are consistent with current licensee procedures for other radiation monitors in Table 4.3-3. If this monitor is inoperable, the action statement requires that environmental releases through the vaporizer be terminated immediately.

Proposed surveillance 4.9.13 would be subject to the 25% surveillance extension described in ROP Section 4.0.2. This extension differs from the current agreement between GPU Nuclear and the State of Pennsylvania for AGW sampling. For example, currently boron analysis of the evaporator distillate and vaporizer discharge is conducted every 12 $\pm$ 2 hours, and vaporizer feed is sampled every 48 $\pm$ 4 hours. ROP Section 4.0.2 would permit these surveillances to be conducted every 12 $\pm$ 3 hours and 48 $\pm$ 12 hours, respectively. GPU Nuclear believes this is acceptable since ROP Section 4.0.2 also specifies tolerance values over three (3) test intervals that are sufficiently restrictive to ensure the reliability associated with the surveillance activity is not degraded beyond that obtained from the normal specified interval.

The proposed change to Tech. Spec. 6.8.3.1.d is administrative in nature to be consistent with the proposed change to Tech. Spec. 3.9.13.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

GPU Nuclear has determined that this Technical Specification Change Request involves no significant hazards consideration as defined by the NRC in 10 CFR 50.92.

1. Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of occurrence or the consequences of an accident previously evaluated.

   The proposed change defines system operating limits for the processing of AGW that are consistent with current licensing commitments. Processing of AGW in accordance with the limits specified in the proposed LCO and surveillance requirements provides assurance that effluent discharges from the PWDS will be well within regulatory limits. Therefore, this change does not increase the probability of occurrence or the consequences of an accident previously evaluated.

2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

   Operation of the PWDS will be as described in the Technical Evaluation Report for PWDS (Reference 3), which has been reviewed and approved by the NRC (Reference 2). This proposal does not affect any of the accident scenarios described in Reference 5 or alter the method of operation. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

   The activity releases resulting from PWDS processing and discharge of BASE CASE WATER are a small fraction of the releases permissible in accordance with existing regulatory requirements. The PWDS shall be operated in a manner such that the PEIS projections of environmental impact are not exceeded. Therefore, it is concluded that operation of the facility in accordance with the proposed amendment does not involve a significant reduction in a margin of safety.

The Commission has provided guidelines on the application of the three standards by listing specific examples in 45 FR 14870. The proposed amendment is considered to be in the same category as example (i) of amendments that are considered not likely to involve significant hazards consideration in that these changes are primarily administrative in nature to reflect current licensing commitments. Thus, operation of the facility in accordance with the proposed amendment involves no significant hazards considerations.

IMPLEMENTATION

It is requested the amendment authorizing this change become effective immediately upon issuance and shall be implemented within 30 days.

REFERENCES

1. Atomic Safety and Licensing Board Final Initial Decision in the Matter of General Public Utilities Nuclear Corporation, et. al., ASLBP No. 87-554-3-OLA, dated February 2, 1989.

2. NRC letter dated September 11, 1989, M. T. Masnik to M. B. Roche, "Issuance of Amendment (TAC No. 62068) and Approval of the TER on Processed Water Disposal System."

3. GPU Nuclear letter C000-90-1031/4410-90-L-0059 dated August 3, 1990, "Processed Water Disposal System Technical Evaluation Report, Revision 2."