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November 5, 1984

Docket No. 50-320

GPU Nuclear Corporation
ATTN: Mr. F. R. Standerfer
Vice President/Director, TMI-2
P. O. Box 480
Middletown, PA 17057

Dear Sir:

Subject: Three Mile Island Nuclear Station Unit 2
Operating License No. DPR-73
Docket No. 50-320
Recovery Operations Plan Change Request No. 24

Reference: Letter from F. R. Standerfer to W. D. Travers, 4410-84-L-0154,
dated October 9, 1984

The referenced letter proposed changes to the Recovery Operations Plan requirements regarding operability of the Standby Pressure Control (SPC) System. The changes were requested in order to remove the SPC nitrogen supply bottles in support of installation of the Defueling Water Cleanup System. The basis for the proposed change is that with the current RCS condition, the functions of the SPC system differ from the original design and the system is no longer needed for its original design purpose.

Based on our enclosed safety evaluation we have concluded that the proposed changes will not present undue risk to the health and safety of the public and site workers. We are also changing the minimum boron concentration for the Borated Water Storage Tank and the SPC System specified in Recovery Operations Plan section 4.1.1.g(2) and 4.1.1.j(1) from 3000 to 3500 ppm. This is to correct an administrative omission in our issuance of Recovery Operations Plan Change No. 19 which was identified in your memorandum 4410-84-M-0486, from J. J. Byrne to P. J. Grant, dated August 9, 1984. We therefore approve the proposed changes and are enclosing the amended pages for Recovery Operations Plan change No. 23.

ORIGINAL SIGNED BY:
William D. Travers

William D. Travers
Deputy Program Director
TMI Program Office

841115031B 841105
PDR ADDCK 05000320
P PDR

Attachments: As stated

cc: J. Barton
R. Rogan
R. Freemanman
A. Miller
S. Levin
T. Demmitt

OFFICE	TMIPO	TMIPO for	TMIPO	TMIPO
NAME	JAThomas:wa	TCPointexter	PJGrant	WDTravers
DATE	11/5/84	11/5/84	11/5/84	11/3/84

ATTACHMENT
SAFETY EVALUATION

SUMMARY/DISCUSSION

The Standby Pressure Control (SPC) System was designed to provide an injection rate of 80 gpm to the Reactor Coolant System (RCS) while maintaining the RCS pressure at 100 to 110 psig. The 80 gpm injection rate was based on compensating for the design maximum shrink in RCS volume while maintaining the system pressure. The Technical Specification and Recovery Operations Plan requirements were intended to assure sufficient nitrogen pressure to supply the motive force for the borated makeup water injection and a sufficient volume of water (2300 gallons) in the SPC surge tanks to compensate for the maximum postulated shrink. With the RCS in its present depressurized and vented condition the pressure control function of the SPC system is no longer necessary, and the system now only provides a source of borated makeup water to compensate for normal RCS leakage. This Recovery Operations Plan Change deletes the requirements for a minimum makeup water inventory in the SPC surge tanks and a minimum pressure in the nitrogen banks, but it adds requirements to assure both a source of borated makeup water in the SPC charging water storage tank and an available pump for injecting the makeup water.

With the proposed change, the Recovery Operations Plan will require a minimum of 2300 gallons of borated water in the SPC Charging Water Storage Tank and one operable SPC Charging Pump with a minimum capacity of 30 gpm. Unidentified RCS leak rate is procedurally controlled such that leak rates of greater than 1 gpm require taking emergency actions, and plant operating procedures require that additional systems (i.e., BWST) be aligned for RCS injection if leak rate increases to 3.5 gpm. The replenishment rate of the SPC system from its boric acid mixing tank and transfer pump are such that with continuous batching the charging water storage tank (SPC-T-4) can provide continuous RCS makeup to compensate for up to a 4 gpm RCS leak rate.

In addition, the SPC system makeup inventory will assure sufficient injection capacity to maintain adequate RCS inventory in the event of a failed incore instrument tube until the higher capacity makeup pumps or decay heat removal pumps can be placed in service. Therefore, since the proposed Recovery Operations Plan Changes will still assure an operable flowpath for injection of a sufficient volume of borated makeup water to the RCS, the changes do not constitute a reduction in plant safety margins nor do they cause any new potential consequences to the health and safety of the public or site workers.

SURVEILLANCE REQUIREMENTS

4.1 WATER INJECTION COOLING AND REACTIVITY CONTROL SYSTEMS

4.1.1 BORATION CONTROL

BORON INJECTION

4.1.1.1 Two systems capable of injecting borated cooling water into the Reactor Coolant System shall be demonstrated OPERABLE:

- a. Deleted.
- b. At least once per 31 days by verifying that each accessible (per occupational exposure considerations) valve (manual, power operated or automatic) in each flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. At least once per 31 days (when makeup pump is required OPERABLE) by verifying (per occupational exposure considerations), that on recirculation flow, the makeup pump required by Technical Specification 3.1.1.1 develops a discharge pressure of greater than or equal to 1125 psig and that each pump operates for at least 15 minutes.
- d. At least once per 31 days by verifying (per occupational exposure considerations), that on recirculation flow, the decay heat removal pump required by Technical Specification 3.1.1.1 develops a discharge pressure of greater than or equal to 151 psig and that each pump operates for at least 15 minutes.
- e. Deleted.
- f. At least once per 7 days when valve DH-V1 or DH-V171 is open by verifying that the makeup pump electrical power supply circuit breakers are "racked out."
- g. At least once per 7 days by:
 1. Deleted.
 2. Verifying the boron concentration in the BWST is between 3500 and 6000 ppm.
 3. Deleted.
 4. Verifying the contained borated water volume of the BWST is at least 100,000 gallons.
 5. Deleted.

SURVEILLANCE REQUIREMENTS

BORATED INJECTION (Continued)

- h. At least once per 24 hours by verifying the BWST temperature is at least 50 degrees Fahrenheit when the outside air temperature is less than 50 degrees Fahrenheit.
- i. At least once per 12 hours (when system is in operation) by verifying that the Standby Reactor Coolant System Pressure Control System:
 - 1. Charging Water Storage Tank water volume is filled with a minimum of 2300 gallons.
 - 2. Deleted.
 - 3. Deleted.
- j. At least once per 7 days by verifying that the Charging Water Storage Tank contains borated water with:
 - 1. A boron concentration between 3500 and 6000 ppm.
 - 2. Deleted.
- k. Deleted.
- l. At least once per 31 days by verifying that at least one Standby Pressure Control System Charging Pump develops a minimum flowrate of 30 gpm.

TMI-2 SERVICE LIST

Dr. Thomas Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

John F. Wolfe, Esq., Chairman,
Administrative Judge
3409 Shepherd St.
Chevy Chase, MD. 20015

Dr. Oscar H. Paris
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Frederick H. Shon
Administrative Judge
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Karin W. Carter
Assistant Attorney General
505 Executive House
P.O. Box 2357
Harrisburg, PA 17120

Dr. Judith H. Johnsrud
Environmental Coalition on
Nuclear Power
433 Orlando Ave.
State College, PA 16801

George F. Trowbridge, Esq.
Shaw, Pittman, Potts and
Trowbridge
1800 M. St., NW.
Washington, D.C. 20036

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Atomic Safety and Licensing Appeal Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Secretary
U.S. Nuclear Regulatory Commission
ATTN: Chief, Docketing & Service Branch
Washington, D.C. 20555

Mr. Larry Hochendoner
Dauphin County Commissioner
P.O. Box 1295
Harrisburg, PA 17108-1295

John E. Minnich, Chairperson,
Dauphin County Board of Commissioners
Dauphin County Courthouse
Front and Market Streets
Harrisburg, PA 17101

Dauphin County Office of Emergency
Preparedness
Court House, Room 7
Front & Market Streets
Harrisburg, PA 17101

U.S. Environmental Protection Agency
Region III Office
ATTN: EIS Coordinator
Curtis Building (Sixth Floor)
6th & Walnut Streets
Philadelphia, PA 19106

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

David Ness
Office of Environmental Planning
Department of Environmental Resources

Willis Fixby, Site Manager
U.S. Department of Energy
P.O. Box 88
Middletown, PA 17057-0311

David J. McGoff
Division of Three Mile Island Programs
NE-23
U.S. Department of Energy
Washington, D.C. 20545

William Lochstet
104 Davey Laboratory
Pennsylvania State University
University Park, PA 16802

Randy Myers, Editorial
The Patriot
812 Market St.
Harrisburg, PA 17105

Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220
7910 Woodmount Ave.
Bethesda, MD. 20814

Michael Churchhill, Esq.
PILCOP
1315 Walnut St., Suite 1632
Philadelphia, PA 19107

Linda W. Little
5000 Hermitage DR.
Raleigh, NC 27612

Marvin I. Lewis
6504 Bradford Terrace
Philadelphia, PA 19149

Jane Lee
183 Valley Rd.
Etters, PA 17319

J.B. Liberman, Esquire
Berlack, Israels, Liberman
26 Broadway
New York, NY 10004

Walter W. Cohen, Consumer Advocate
Department of Justice
Strawberry Square, 14th Floor
Harrisburg, PA 17127

Edward O. Swartz
Board of Supervisors
Londonderry Township
RFD #1 Geyers Church Rd.
Middletown, PA 17057

Robert L. Knupp, Esquire
Assistant Solicitor
Knupp and Andrews
P.O. Box P
407 N. Front St.
Harrisburg, PA 17108

John Levin, Esquire
Pennsylvania Public Utilities Comm.
P.O. Box 3265
Harrisburg, PA 17120

Honorable Mark Cohen
512 E-E Main Capital Building
Harrisburg, PA 17120