

DISTRIBUTION:  
Docket No. 50-320  
NRC PDR  
Local PDR  
DCS  
TMI HQ r/f  
TMI Site r/f  
WDTravers  
MTMasnik  
RHall  
Acting Chief, Tech Support  
CCowgill  
RCook  
JThomas  
LChandler, ELD  
IE  
ACRS  
M-Town Office

March 17, 1986  
NRC/TMI-86-024

Docket No. 50-320

Mr. F. R. Standerfer  
Vice President/Director  
Three Mile Island Unit 2  
GPU Nuclear Corporation  
P. O. Box 480  
Middletown, PA 17057

Dear Mr. Standerfer:

Subject: Defueling Water Cleanup System Technical Evaluation Report

- References: (a) Letter 4410-85-L-0192, F. Standerfer to B. Snyder, Defueling Water Cleanup System Technical Evaluation Report, dated September 27, 1985  
(b) Letter 4410-86-L-0011, F. Standerfer to W. Travers, Defueling Water Cleanup System Technical Evaluation Report, dated February 7, 1986  
(c) Letter NRC/TMI-85-055, W. Travers to F. Standerfer, Defueling Water Cleanup System, dated August 6, 1985

References (a) and (b) forwarded for NRC staff approval, revisions to the Defueling Water Cleanup System (DWCS) Technical Evaluation Report (TER), and the corresponding revisions to the associated System Descriptions (SD). The NRC staff safety evaluation and approval of the previous TER are documented in reference (c).

The revisions include minor wording changes for clarification, discussion of system modifications to connect to the defueling canister dewatering system, modifications to connect to the canister decontamination system, modifications that replace the suction hoses on the reactor vessel filtration pumps with hard pipe, and installation of a main filter canister bypass capability.

We have completed our review of the proposed modifications discussed in the revised TER. We have determined that the revisions do not alter our previous conclusions discussed in reference (c) provided the additional administrative controls discussed below are implemented when operating the DWCS in a mode which bypasses the main filter canisters.

The original system design included post filters in the process stream going to the ion exchangers. The post filters served as an additional barrier to prevent fuel fines from reaching the ion exchange media in the event of filter

OFFICE	8603240104	860317					
SURNAME	PDR	ADOCK	05000320				
DATE	P	PDR					

March 17, 1986

break-through in the main filter canisters. Your proposed operating mode which bypasses the main filter canisters would result in the post filters being the only barrier to fuel transport to the ion exchangers. Although this does not present a significant criticality concern due to the presence of borated water, it does present a concern for future disposal of the ion exchange media because of the potential for contamination with transuranic (TRU) material in either excessive or unknown concentrations. We agree with your assessment that the probability of fuel transport to the ion exchangers due to post filter failure is reduced by your proposal to reduce the allowable differential pressure across the post filters during main filter bypass operation. However, we believe additional controls are necessary and have discussed this issue with members of your staff. Pursuant to the discussions between our respective staffs, we approve the modifications described in the revised DWCS TER through revision number 9, and we approve operation of the system in a mode bypassing the main filter canisters provided the following procedural controls are implemented:

- (1) The preferred mode of operation when bypassing the main filter canisters will be to return the post filter effluent directly to its source, or to process through the Submerged Demineralizer System rather than processing through the DWCS ion exchangers.
- (2) If it is necessary to process the post filter effluent through the DWCS ion exchangers, it will be done under the control of a process control plan with adequate provisions to accurately assess the quantity of TRU material deposited on the ion exchange media.

Operation of the system will be contingent upon your submittal of the applicable procedures subject to an approval per Technical Specification 6.8.2.

Sincerely,

ORIGINAL SIGNED BY  
William D. Travers

William D. Travers  
Director  
TMI-2 Cleanup Project Directorate

cc: T. F. Demmitt  
R. E. Rogan  
S. Levin  
W. H. Linton  
J. J. Byrne  
A. W. Miller  
Service Distribution List  
(see attached)

OFFICE	TMICPD	TMICPD	TMICPD				
SURNAME	J. Thomas:jes	Act. Chief	W. Travers				
DATE	3/14/86	3/14/86	3/17/86				

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

Gen. Kennedy  
Office of Environmental Planning  
Department of Environmental Resources  
P.O. Box 2063  
Harrisburg, PA 17120

Willis Bixby, 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 Woodmont Ave.  
Bethesda, MD. 20814

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

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

Marvin J. 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

Mr. Edwin Kintner  
Executive Vice President  
General Public Utilities Nuclear Corp.  
100 Interpace Parkway  
Parsippany, NJ 07054

Ad Exable  
Lancaster New Eng  
P West King Street  
Lancaster, PA 17601