May 29, 1986
NRC/TMI 86-052

Docket No. 50-320

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

Dear Mr. Standerfer:

Subject: Safety Evaluation Report (SER) for Core Stratification Sample Acquisition, Revision 3

The Nuclear Regulatory Commission (NRC) staff has reviewed your December 31, 1985 Safety Evaluation Report (SER) for Core Stratification Sample Acquisition and the additional supporting information provided in your May 13, 1986 letter. As stated in the enclosed safety evaluation issued by the staff, we conclude that the proposed activities can be accomplished without significant risk to the health and safety of the public provided that they are in accordance with the limitations stated in both your SER and responses to the staff's request for additional information. This activity falls within the scope of activities previously considered in the Programmatic Environmental Impact Statement.

We therefore approve the operation of the system as described in your SER contingent upon the submittal of the related procedures subject to Technical Specification 6.8.2.

Sincerely,

William D. Travers
Director
THI-2 Cleanup Project Directorate

Enclosure: As stated

cc: T. F. Demmitt
R. E. Rogan
S. Levin
W. H. Linton
J. J. Byrne
A. W. Miller
Service Distribution List
(see attached)
SAFETY EVALUATION REPORT FOR CORE
STRATIFICATION SAMPLE ACQUISITION, REVISION 3

INTRODUCTION

On August 30, 1985, GPUN submitted the Safety Evaluation Report for Core Stratification Sample Acquisition (Reference 1). This encompassed drilling core samples down to the lower grid assembly. Upon review, the NRC staff requested additional information (Reference 2). In response, GPUN submitted Reference 3 which also revised the work activity to allow for the option of boring through the flow distributor plate, if necessary to permit TV camera access. The NRC staff approved the original scope of work activity, i.e., drilling to the lower grid assembly (Reference 4) and requested additional information on the revised work activity (Reference 5). In response, GPUN submitted Reference 6.

This safety evaluation addresses the revised work scope described in GPUN submittals, References 3 and 6.

EVALUATION

The change in work scope to allow the option of boring through the flow distributor plate if necessary, does not change the criticality, pyrophoricity, or mechanical force considerations previously evaluated by the NRC. However, the operation could allow the drill string to approach the lower vessel head as close as six inches. Errors in drill string length or coupling could allow the bit to contact the lower vessel head. To prevent this possibility, core bore activities will be restricted to within a cylindrical envelope of approximately 8'1" in diameter centered on the reactor vessel centerline. Additionally, the licensee has committed to a program of measurements and verification of drill string length and coupling to insure that contact with the lower vessel head is not possible when the drill is fully extended into the reactor vessel. The staff finds that the licensee's system of control of the proposed activity is acceptable.

CONCLUSION

The staff has examined and evaluated the potential risks associated with the Core Stratification Sample Acquisition Program (Revision 3), and determined that pyrophoricity, criticality, and mechanical force considerations do not differ from those previously reviewed and approved. The licensee's program to assure that the drill does not adversely affect reactor vessel integrity is acceptable. We therefore conclude that Core Stratification Sample Acquisition Activities (Revision 3) can be implemented without significant risk to the health and safety of the public.
References


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

John F. Wolfe, Esq., Chairman,
Administrative Judge
2409 Shepherd St.
Chevy Chase, MD 20015

Dr. Oscar H. Parks
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 V. Carter
Assistant Attorney General
505 Executive House
P.O. Box 2397
Harrisburg, PA 17120

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

George F. Townsbride, Esq.
Shaw, Potts, and Townsbridge
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. Hinrich, 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: EJS Coordinator
Curtis Building (5th Floor)
617 E. Walnut Streets
Philadelphia, PA 19106

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

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

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

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

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

Robert A. 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
Berkman & Liberman
26 Broadway
New York, NY 10004

Walter W. Cohen, Consumer Advocate
Department of Justice
Strawberry Square, 4th Floor
Harrisburg, PA 17127

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

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

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

Mr. Edwin Kiente
Executive Vice President
General Public Utilities Nuclear Corp.
100 Intercourse Parkway
Lancaster, PA 17601