

October 16, 1990

Docket No. 50-219

DISTRIBUTION

Mr. J. D. DeVine, Jr.
Vice President and Director
Technical Functions
GPU Nuclear Corporation
One Upper Pond Road
Parsippany, New Jersey 07054

Docket file NRC & L PDRs
SNorris PDI-4 File
JStolz SVarga
ADromerick AD/RI
RHermann OGC
GBachi ACRS (10)
KMechion EJordan
JRichardson

Dear Mr. DeVine:

SUBJECT: DRYWELL CORROSION PROGRAM - OYSTER CREEK NUCLEAR GENERATING STATION

On September 29, 1990, GPU Nuclear Corporation (GPUN) met with the NRC staff to discuss the Oyster Creek Nuclear Generating Station's Drywell Corrosion Program. During the meeting, GPUN requested that the staff provide feedback regarding the Drywell Corrosion Program. As a result of the discussions held during the meeting the staff so far has identified the following aspects of GPUN's presentation that call for staff feedback. These are: 1) sampling of shell surfaces for UT measurements, 2) appropriateness of the use of ASME Section III Subsection NC, and 3) the need for detailed review of preliminary results of the stress analysis presented by GPUN. The Enclosure provides details of the required clarification.

If during our ongoing review of your program additional items requiring further clarification are identified we will notify you.

If you have any questions regarding the above, please contact me.

Sincerely,

original signed by

Alexander W. Dromerick, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

DFC	: PDI-4:LA	: PDI-4:PM	: ESGB	: EMCB/D	: DET	: PDI-4:D
NAME	: SNorris	: ADromerick/BAH	: GBachi	: CCheng	: JRichardson	: JStolz
DATE	: 10/9/90	: 10/9/90	: 10/9/90	: 10/9/90	: 10/12/90	: 10/10/90

Document Name: DRYWELL CORROSION OC

9010290053 901016
PDR ADOCK 05000219
F FDC

DF01
11



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 16, 1990

Docket No. 50-219

Mr. J. D. DeVine, Jr.
Vice President and Director
Technical Functions
GPU Nuclear Corporation
One Upper Pond Road
Parsippany, New Jersey 07054

Dear Mr. DeVine:

SUBJECT: DRYWELL CORROSION PROGRAM - OYSTER CREEK NUCLEAR GENERATING STATION

On September 29, 1990, GPU Nuclear Corporation (GPUN) met with the NRC staff to discuss the Oyster Creek Nuclear Generating Station's Drywell Corrosion Program. During the meeting, GPUN requested that the staff provide feedback regarding the Drywell Corrosion Program. As a result of the discussions held during the meeting the staff so far has identified the following aspects of GPUN's presentation that call for staff feedback. These are: 1) sampling of shell surfaces for UT measurements, 2) appropriateness of the use of ASME Section III Subsection NC, and 3) the need for detailed review of preliminary results of the stress analysis presented by GPUN. The Enclosure provides details of the required clarification.

If during our ongoing review of your program additional items requiring further clarification are identified we will notify you.

If you have any questions regarding the above, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Alexander W. Dromerick".

Alexander W. Dromerick, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

Mr. J. D. DeVine, Jr.
GPU Nuclear Corporation

Oyster Creek Nuclear
Generating Station

cc:

Ernest L. Blake, Jr.
Shaw, Pittman, Potts and Trowbridge
2300 N Street, NW
Washington, D.C. 20037

Resident Inspector
c/o U.S. NRC
Post Office Box 445
Forked River, New Jersey 08731

I. H. Jolles, Executive Vice President
GPU Service Corporation
100 Interpace Parkway
Parsippany, New Jersey 07054

Commissioner
New Jersey Department of Energy
101 Commerce Street
Newark, New Jersey 07102

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Kent Tosch, Chief
New Jersey Department of Environmental
Protection
Bureau of Nuclear Engineering
CN 415
Trenton, New Jersey 08625

BWR Licensing Manager
GPU Nuclear Corporation
1 Upper Pond Road
Parsippany, New Jersey 07054

Mayor
Lacey Township
818 West Lacey Road
Forked River, New Jersey 08731

Licensing Manager
Oyster Creek Nuclear Generating Station
Mail Stop: Site Emergency Bldg.
P. O. Box 388
Forked River, New Jersey 08731

Mr. E. E. Fitzpatrick
Vice President and Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

ENCLOSURE

REQUESTED CLARIFICATION REGARDING

OYSTER CREEK CORROSION OF DRYWELL SHELL

DOCKET NO. 50-219

There are several aspects of the licensee presentation that call for staff feed back, these are: i) sampling of shell surfaces for UT measurements, ii) appropriateness of the use of ASME Section III Subsection NC, and iii) need for detailed review of preliminary results of the stress analysis presented by the licensee.

- i) Sampling plan for monitoring drywell corrosion: The licensee presented a statistically based inspection program of the entire shell surface not embedded in concrete. However, based on the results of observation so far, the licensee presented a correlation between corrosion and presence of moisture for example, in the sand region the plug samples 15A and 11A-H were dry and had corrosion rates equal to zero. It is not clear to the staff how the licensee plans to locate sensors for on-line monitoring of drywell corrosion rate at those places where the presence of moisture is likely. The staff needs to review the statistically based sampling plan.
- ii) The original design code for the Oyster Creek shell is ASME Section VIII. Should the licensee choose to use a more recent code, there will be a burden on the licensee to clearly establish that the material selection, design, fabrication, inspection and surveillance in service are all in accordance with the requirements of the current code which should be the ASME Section III, Subsection NE, and Section XI.
- iii) It is clear that through the corrosion process, the margin for over pressure capacity of the containment has been reduced (see GDC#50 and 51). Therefore, the staff judgment as to the adequacy of the drywell shell margin must be based on a detailed review of the stress calculations and the stress allowables.
- iv) In your presentation you indicated that there has been leakage from refueling cavity liner, equipment pool and spent fuel pool. Describe the actions you will take to prevent leakage from these structures into the drywell gap and the effect of the leakage on other structures or equipment.