

**GPU Nuclear Corporation**

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Writer's Direct Dial Number:

May 11, 1984

Mr. Dennis M. Crutchfield, Chief  
Operating Reactors Branch #5  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Crutchfield:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Additional Request to Defer Modifications  
to One Masonry Wall (IE Bulletin 80-11)

Subsequent to receipt of your letter dated March 27, 1984, which forwarded an evaluation report granting deferment of modifications to certain masonry walls, we have identified one (1) additional masonry wall which we believe a deferment until the next refueling outage (Cycle 11) is acceptable. The wall in question is wall No. 21, which is the outside boundary wall for the 480 Volt Switchgear Room. Recent work to address Appendix R Fire Protection requirements has identified the need to eliminate this wall in order to facilitate the installation of the Remote Shutdown Panel. This work is scheduled for the next refueling outage.

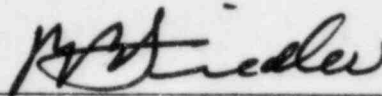
Two of the three walls in the 480 Volt Switchgear Room (Wall Nos. 22 and 23), previously identified as requiring modifications during the current outage, have been modified. Our consultant has reanalyzed the consequences of the failure of wall No. 21 during a seismic event and has concluded that its failure would not impact the safe shutdown of the plant. We concur with this conclusion. The attachment to this letter provides the revised pages of Report No. 02-0370-1132 applicable to the reevaluation of wall No. 21.

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IE11 Original  
1/1 To: Reg Filer

If you should have any questions regarding the information herein,  
please contact Mr. Paul Czaya at (609) 971-4893.

Very truly yours,



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Peter B. Fiedler  
Vice President and Director  
Oyster Creek

PBF:PFC:dam  
Attachment

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

Resident Inspector  
Oyster Creek Nuclear Generating Station  
Forked River, NJ 08731

OYSTER CREEK NUCLEAR GENERATING STATION  
MASONRY WALL FAILURE CONSEQUENCE ANALYSIS

1.0 INTRODUCTION

In accordance with the requirements of NRC I.E. Bulletin 80-11, all masonry walls at Oyster Creek that are in proximity to or have attachments from safety related piping or equipment such that wall failure could affect a safety related system have been identified to the Nuclear Regulatory Commission. These walls are being upgraded to meet the required seismic standards. Of the masonry walls identified, twenty-five still require modifications.

In order to obtain a delay in the required wall repairs, GPUNC contracted Impell Corporation to perform a wall failure consequence analysis. This report documents the methodology and results of this analysis.



Subsequent to the completion of this report, Walls 22 and 23 were modified, whereas Wall 21 was not modified. Since Walls 21, 22 and 23 are all in the area of the 480V switchgear room, GPUN requested Impell to evaluate the consequence of Wall 21 failing and Walls 22 and 23 remaining in tact. It should be noted that the initial analysis conservatively considered all of Wall 21 failing, whereas the structural evaluation for Wall 21 indicates that only the 23 foot continuous span required modification and the 4 foot floor to ceiling section of the wall situated East of the 7 foot doorway did not require modification.

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MASONRY WALL FAILURE CONSEQUENCE ANALYSIS

4.0 CONCLUSION

The equipment which could affect plant safety or is utilized to achieve the plant protective functions required for plant shutdown is affected by the following wall failures:

1, 2, 3, 4, 5, 6, 7, 16, 21, 22, 23, and 42

These twelve walls will be structurally modified prior to restart from the current 1983-1984 refueling outage with the exception of wall 42. Wall 42 was removed above the cable trays. Wall 42 was previously designated as a wall requiring addition of boundary supports. The removal of the top of the wall eliminated the requirement for boundary supports.

Walls whose failure does not directly affect plant shutdown are as follows:

8, 15, 17, 18, 19, 20, and 25

These walls will be modified prior to restart from the following refueling outage. Walls 24, 29, 30, 31, 32 and 33 will be reanalyzed to determine if the ESW and containment spray piping can maintain structural integrity after wall failure. If the analysis determines that the wall failures have a negative effect of the containment spray piping, wall 24, 29, 30, 31, 32 and 33 will be modified prior to restart.



Subsequent to the completion of Revision 0 of this report, Walls 22 and 23 were modified whereas Wall 21 was not modified. GPUN requested that Impell evaluate the consequence of Wall 21 failing and Walls 22 and 23 remaining intact. The conclusion derived from this evaluation is that no plant protective functions required for plant shutdown will be adversely affected by leaving Wall 21 unmodified. This conclusion is based on the following: Wall 21 is essentially two (2) separate sections, a 23 foot long section running East from a concrete wall to a doorway, and a four foot floor to ceiling section running East from the doorway to a concrete wall. The structural evaluation for Wall 21 indicates that the 23 foot section of wall requires modification whereas the 4 foot section is seismically adequate as presently installed and does not require modification. Accordingly, Wall 21 was evaluated in two phases:

23 Foot Section: Maintaining the 23 foot section of Wall 21 unmodified does not affect any plant shutdown systems since all safety related components in proximity to the wall are above the elevation of the wall or redundant components are available since Walls 22 and 23 have been modified.

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MASONRY WALL FAILURE CONSEQUENCE ANALYSIS

4 Foot Section: This section of Wall 21 was conservatively considered to fail in Revision 0 of this report and impact on Cable Trays V-30, 15A and 16C. Since subsequent information received by Impell indicates that this section of Wall 21 is seismically adequate as presently installed, the aforementioned Cable Trays will not be impacted.

Report No. 02-0370-1132  
Revision 1

WALL NO. 21


LOCATION: OFFICE BUILDING SWITCH GEAR ROOM

COMPONENT

FUNCTION

Swgr USS 1B2  
Power Cabinets

- o Containment Spray PP 1-4
- o SD Cooling PP NU02C
- o RBCCW PP 1-2
- o Containment Spray PP 1-3
- o MCC 1B2B
- o CRD Feed PP NC08B
- o Vital MCC-1B
- o MCC-1B21
- o MCC-1B22
- o Ltg Dist. Panel B2
- o Building Exhaust Fan F-1-6
- o SD PP NU02B
- o Core Spray Booster PPs NZ03B, C
- o Auxiliary Power Panel
- o Main Breaker 1B2M
- o MCC-1B24

					OYSTER CREEK NUCLEAR GENERATING STATION MASONRY		
					WALL FAILURE WALKDOWN, EQUIPMENT AFFECTED		
1	JSY	4/30/84	PC	5-1-84	eids  nuclear	JOB NO 0370-043-1671	PAGE 18
0	MFB	6/6/83	EX	6-8-83		CALC NO 0370-043-01	OF 30
REV	BY	DATE	CHECKED	DATE			



WALL NO. 21

LOCATION: OFFICE BUILDING SWITCH GEAR ROOM

COMPONENT


FUNCTION

Motor Control Ctrs o 1B21

Panels 16-8 o Power for Swgr Room Area and Access Door  
50-2  
49-2

⚠ NOTE: The following items have been eliminated from the above list due to supplemental information provided to Impell by GPUN or additional analysis done by Impell:

- Cable Trays V-30, 15A and 16C - Supplemental information received by Impell from GPUN indicates that the portion of Wall 21 in proximity to these components is seismically adequate as installed. Accordingly, the function of these cable trays will be maintained.
- Ventilation Ducts, Cable Tray 19D - These components are above the elevation of the 27 foot continuous span of Wall 21 and are not an integral part of the wall. Accordingly, maintaining the 27 foot continuous span of Wall 21 as presently installed will have no affect on the function of these components.

					OYSTER CREEK NUCLEAR GENERATING STATION MASONRY	
					WALL FAILURE WALKDOWN, EQUIPMENT AFFECTED	
1	JSP	4/30/84	ARC	5-1-84	JOB NO	0370-043-1671
0	MFB	6/6/83			CALC NO	0370-043-01
REV	BY	DATE	CHECKED	DATE	eds  nuclear	
						PAGE 19 OF 30

## WALL FAILURE CONSEQUENCE ANALYSIS

Concrete Wall Identification: 21, 22, & 23 Office Building 480V Swgr. Room				Job No. 9370-043-1671	
System Affected: As Listed Below				Prepared by: J. J. [Signature]	
				Date: 12/30/84	
				Checked by: R. C. [Signature]	
				Rev. 1	
				Date: 5-1-84	

Component Name and Number	Failure Mode	Symptoms and Local Effects Including Dependent Failures	System Inherent Compensating Provision	Summary: Effect Upon System	Summary: Effect Upon Plant Performance
Instrument Panels IT-3, IT-4, IT-4A, B, C	Off	Enveloped by USS 1A2 & 1B2 failure.			
Instrument Panels 3 & 4	Off	Enveloped by USS 1A2 & 1B2 failure.			
Transformer IT-3, IT-4A, B	Off	Enveloped by USS 1A2 & 1B2 failure.			
Terminal Boxes A, B, F	Off	Enveloped by USS 1A2 & 1B2 failure.			
<p>⚠ All of the above equipment damage has been alleviated by the structural modifications to walls 22 and 23 with the exception of MCC 1B21 and Switchgear Unit Substation USS 1B2. Due to the modifications to Walls 22 and 23, the redundant trains for these components will maintain their functionality during a seismic event. Due to the presence of the redundant trains and the results of the subsequent analysis delineated by the Note on page 19/30 of Appendix D, maintaining Wall 21 as presently installed will not result in any detrimental consequences to protective functions required for plant shutdown.</p>					



OYSTER CREEK NUCLEAR GENERATING STATION  
MASONRY WALL FAILURE CONSEQUENCE ANALYSIS

TABLE C-2  
(Continued)

AFFECT OF WALL FAILURE ON PLANT SYSTEMS

<u>FAILED SHUTDOWN SYSTEM</u>	<u>CAUSE OF FAILURE</u>	<u>COMMENTS</u>
Emergency Diesel Generators	Battery Room 17, 18; Control Room Walls 6, 7	DC Power for breakers control and indication at panels 9XF, 8F, and 9F
Reactor Protection System	Cable spreading room wall 25; control room walls 2, 16; switch gear room walls 21, 22, 23.	Both channels lost should fail safe
Electomatic Relief Valves	Switch gear room walls 21, 22, 23; battery room walls 17, 18; control room walls 2, 3	Manual operation not possible
Emergency Condenser System	Reactor Building Walls 31, 32; Control Room Walls 2, 3; Battery Room walls 17, 18	Auto control of valves disabled.
Containment Spray System	Reactor Building Walls 29, 30, 31, 33; Switch Gear Room Walls 21, 22, 23; Control Room Walls 2, 3; Battery Room Walls 17, 18	Pipe ruptured, torus drained, containment isolation not possible. Both trains lost.



Subsequent to the completion of Revision 0 of this report, Walls 22 and 23 have been modified and the maintaining of Wall 21 as presently installed has been determined not to have a detrimental affect on protective functions required for plant shutdown.