

NRC FORM 386 (4-95)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-8 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.						
LICENSEE EVENT REPORT (LER)					DOCKET NUMBER (2) 05000-416		PAGE (3) 1 of 5				
FACILITY NAME (1) Grand Gulf Nuclear Station											
TITLE (4) Containment Penetration Opened Contrary to the Technical Specification Requirement											
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
06	25	98	98	04	01	11	03	98	N/A	05000	
									FACILITY NAME	DOCKET NUMBER	
									N/A	05000	
OPERATING MODE (9)		1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)							
POWER LEVEL (10)		100		20.2201(b)		20.2203(a)(2)(v)		X		50.73(a)(2)(i)	50.73(a)(2)(viii)
20.2203(a)(2)(i)		20.2203(a)(2)(ii)		20.2203(a)(3)(i)		20.2203(a)(3)(ii)		X		50.73(a)(2)(ii)	50.73(a)(2)(x)
20.405(a)(1)(ii)		20.2203(a)(2)(ii)		20.2203(a)(3)(ii)		20.2203(a)(4)		50.73(a)(2)(iii)		73.71	
20.2203(a)(2)(ii)		20.2203(a)(2)(iii)		20.2203(a)(2)(iv)		50.36(c)(1)		50.73(a)(2)(iv)		OTHER	
20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(v)		50.73(a)(2)(vii)		Specify in Abstract below or in NRC Form 386A			
20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(v)		50.73(a)(2)(vii)					
LICENSEE CONTACT FOR THIS LER (12)											
NAME Charles E. Brooks / Sr. Licensing Specialist						TELEPHONE NUMBER (Include Area Code) 601-437-6555					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		
SUPPLEMENTAL REPORT EXPECTED (14)						EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
YES (If yes, complete EXPECTED SUBMISSION DATE)		X		NO		DATE (15)					
ABSTRACT (Limit to 1400 spaces, i. e., approximately 15 single-spaced typewritten lines) (16)											
<p>On June 25, 1998 at approximately 0517 hours, personnel began hanging tags to allow maintenance on the "B" Drywell Purge Compressor Inlet Isolation Stop Check Valve. This valve failed its previous surveillance and was declared inoperable due to leakage. The outboard Drywell Purge Compressor Inlet Isolation Valve was previously closed to isolate the penetration in accordance with Technical Specifications (TS). The Drywell Purge Compressor Test Connection Valve, located on the auxiliary building side of containment and a vent valve inside of containment were tagged open to drain the piping. With the Drywell Purge Compressor Inlet Isolation Stop Check valve inoperable, this valve lineup resulted in a potential leakage path through 3/4-inch valves being open on both the inboard and outboard side of containment. Discussion with operations identified the test connection valve as a containment isolation valve and thus prohibited by TS from being open simultaneously with the vent valve. During this event, the test connection valve and vent valve were left open creating a potential flow path between the containment and the auxiliary building for approximately 10.6 hours. This condition was discovered at approximately 1527 hours on June 25, 1998 and the affected penetration was isolated at approximately 1557 hours on June 25, 1998.</p> <p>The ability to achieve and maintain safe shutdown was not adversely impacted, nor was public health and safety compromised by this event.</p>											
9811160011 981103 PDR ADOCK 05000416 S PDR											

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NRC FORM 366 (4-95)

A. Reportable Occurrence

Limiting Condition for Operation (LCO) Report Number 98-0469 was established because Drywell Purge Compressor Isolation Stop Check Valve 1P41F169B [JM, ISV] failed Surveillance 06-OP-1P41-Q-0005, "Standby Service Water Loop B Valve and Pump Operability Test" [BI]. The protective tag generated to remove components from service to facilitate repair of the check valve failed to identify Valve 1P41F163B [JM, TV] (the test connection valve), as a containment isolation valve. As a result, the requirement of TS 3.6.1.3 NOTE 1, which permits intermittent opening of a containment penetration under the supervision of administrative controls i. e., a dedicated individual stationed to monitor the opened penetration and reseal the penetration should the need arise was not implemented. Upon identification of valve 1P41F163B [JM, TV] as a Primary Containment Isolation Valve, the appropriate actions were taken to restore this condition into conformance with the TS. Opening a containment isolation valve without establishment of administrative controls is not permitted by TS Section 3.6.1.3 and is therefore reportable pursuant to 10 CFR 50.73(a)(2)(i). Subsequent review of this event on August 4, 1998 revealed that the Drywell Purge Compressor Inlet Vent Valve 1P41F260 [VTV], located inside of containment was also open during this period. This valve lineup resulted in a potential flow path through 3/4-inch valves being open on both the inboard and outboard side of containment. Telephone notification to the NRC's Operations Center was made in accordance with 10 CFR 50.72(b)(1)(ii). This revision to the original LER also satisfies the reporting requirement for this event pursuant to 10 CFR 50.73(a)(2)(ii).

The delay in reporting the 10CFR 50.72(b)(1)(ii) issue was the result of a misunderstanding between the operating shift and other plant personnel. While the operating shift was aware of the vent valve being open in containment, other personnel believed the potential flow path to be through the check valve which was initially thought to be disassembled. Because the Auxiliary Building Test Connection Valve (1P41F163B) was shut upon discovery of the event, 24 hours were allowed for an engineering evaluation to determine the significance of a 3/4-inch leakage path bypassing the containment.

Prior to completion of the engineering evaluation, operations personnel who were not on shift and licensing personnel learned that the check valve had not been disassembled. This resulted in the belief that the administrative controls provision of the Technical Specification governing containment penetrations had been violated and the containment had not been bypassed.

GGNS routinely reviews LERs to identify and assess any potential maintenance rule impact resulting from equipment failures described in these reports. During an August 4, 1998 review of the original LER, it was identified that the Drywell Purge Compressor Inlet Vent Valve 1P41F260 [VTR], located inside of containment was not discussed in the LER, even though it was shown on the tag. Further review of the associated work documents identified this valve as also being tagged open during the period that the Test Connection Valve 1P41F163B [JM, TV] in the auxiliary building was open, resulting in a potential leakage path bypassing the containment. This is when it was determined that this event required NRC notification pursuant to 10CFR50.72(b)(1)(ii).

B. Initial Conditions

The plant was in OPERATIONAL CONDITION 1 with reactor power at approximately 100%.

C. Description of Occurrence

On June 24, 1998 at approximately 0115 hours, LCO Number 98-0469 was issued because of internal leakage concerns with 1P41F169B, the Drywell Purge Compressor "B" Isolation Stop Check Valve [JM, ISV]. This valve had failed during performance of the most recent Standby Service Water (SSW) [BI] Quarterly Surveillance. Cooling water for the drywell purge compressors is provided by SSW. The SSW piping is routed through Primary Containment Isolation Valve 1P41F159B [JM, ISV] in the Auxiliary Building [NF], penetrates containment [NH] via a 2 inch diameter pipeline, passes through Valve 1P41F169B [JM, ISV] supplying cooling to the Drywell Purge Compressor "B" Aftercooler and the Drywell Purge Compressor "B" Lube Oil Cooler [VB], then exits the

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containment [NH]. Valve 1P41F163B [JM, TV], located on the auxiliary building [NF] side of the containment wall [NH] is the test connection valve for the "B" Purge Compressor.

LCO 98-0469 identified the applicable TS Sections governing controls for this repair activity as 3.6.1.3 ACTION A1, which requires that the affected penetration be isolated within 4 hours and ACTION A2, which requires verification that the affected penetration flow path is isolated on a frequency of once per 31 days. The affected penetration (Penetration Number 92), was isolated at 0446 hours on June 24, 1998 by closing Valve 1P41F159B. The Test Connection Valve 1P41F163B, was already locked closed. On June 24 at approximately 0206 hours, Work Order 210406 was generated to implement repair of 1P41F169B [JM, ISV].

On June 25, 1998 at 0517 hours, personnel began hanging tags to allow maintenance on the "B" Drywell Purge Compressor Inlet Isolation Stop Check Valve. This valve failed its previous surveillance and was declared inoperable due to leakage. Cooling water for the Drywell Purge Compressors is supplied through Standby Service Water (SSW) piping which passes through the Drywell Purge Compressor Inlet Isolation Valve and enters the containment. The outboard Drywell Purge Compressor Inlet Isolation Valve (Isolation Valve) was previously closed to isolate the penetration in accordance with TS. The Drywell Purge Compressor Test Connection Valve (1P41F163B), located on the auxiliary building side of the containment wall as well as a Vent Valve 1P41F260 inside of containment were tagged opened to drain the required SSW piping. With the Drywell Purge Compressor Inlet Isolation Stop Check valve inoperable due to leakage, this valve lineup resulted in a potential leakage path being opened between the containment and the auxiliary building. During this event, the test connection valve and vent valve were left opened introducing a potential flow path between the containment and the auxiliary building atmosphere for approximately 10.6 hours. This condition was discovered at approximately 1527 hours on June 25, 1998. The penetration was isolated at approximately 1557 hours on June 25, 1998.

On August 4, 1998, during a routine review of the original LER to identify and assess any potential maintenance rule impact, it was identified that the Drywell Purge Compressor Inlet Vent Valve 1P41F260 [VTR], located inside of containment was not discussed in the LER. Further review of the associated work documents identified this valve as also being tagged open during the period that the test connection valve (1P41F163), i.e. the auxiliary building was open, thus resulting in a bypass of the containment.

D. Apparent Cause

Work Practices - error detection practices less than adequate

Failure to follow procedure i. e., self-checking and independent verification to ensure that the impact of the work was properly reviewed and understood so that Technical Specification requirements are met was not performed.

E. Corrective Actions

- 1) All operations personnel were made aware of this event.
- 2) Operations issued a memorandum and night orders to ensure that the appropriate reviews, as delineated by the Protective Tagging System Procedure 01-S-06-1 are performed when issuing equipment tags.

The corrective actions have been completed. Actions necessary to restore the integrity of this primary Containment penetration to operable status were completed immediately upon discovery.

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F. Safety Assessment

The safety function of the primary containment [NH] is to isolate and contain fission products released from the reactor primary system following a Design Basis Accident (DBA) and to provide an essentially leak-tight barrier to confine the postulated release of radioactive material to within regulatory limits. To support this function, fission product releases expected to occur during the DBA are correlated to an assumed leakage rate from the primary containment. Operability of the primary containment as required by Technical Specification assures that leakage rates will not be exceeded.

This event was characterized by a potential leakage path through 3/4-inch valves being open on both the inboard and outboard side of containment. In this event, a primary containment isolation valve connected to a SSW [BI] pipeline that passes through the containment structure wall was inadvertently opened simultaneously with the Drywell Purge Compressor Inlet Vent Valve [VTR], resulting in bypassing Containment. Probabilistic Risk Assessment data results indicate that the probability of the occurrence of the GGNS Design Basis LOCA during the time that this condition existed to be approximately $1.2E-7$, thus well below the safety significance threshold.

While there was not adherence to the Technical Specification for maintaining containment integrity, the health and safety of the public were never compromised as a result of this event.

G. Additional Information

Energy Industry Identification System (EIS) codes are identified in the text within brackets []. Figure 1 depicts the valves lineup configuration that led to occurrence of this event.

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G. Additional Information (Continued)

Figure 1

