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Vice President
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Grand Gulf Nuclear Station

August 7, 1992

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attention: Document Control Desk

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Entry Into TS 3.0.3. Statement Due to Standby Gas Inoperability
LER 92-012-01

GNRO-92/00105

Gentlemen:

Attached is Licensee Event Report (LER) 92-012-01 which is a final report.

Yours truly,

WTC/GAZ/ for
attachment
cc: Mr. D. C. Hintz (w/a)
Mr. J. L. Mathis (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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TITLE (4)
Entry Into TS 3.0.3 Statement Due to Standby Gas Inoperability

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 NAMES	DOCKET NUMBER(S)
0 6	1 0	9 2	9 2	— 0 1 2	— 0 1	0 8	0 7	9 2		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 3 7	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
G. A. Zinke/Manager, Nuclear Safety & Assessment	AREA CODE 6 0 1 1 4 3 7 - 2 4 5 9

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			

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

During Refueling Outage 5 it was determined that a previously identified deficiency concerning potential secondary containment bypass leakage affected the operability of the Standby Gas Treatment System (SBGT). The details of this deficiency were reported in LER 92-011-00 on 7/6/92 as a condition outside the design basis of the plant. A minor modification package (MCP 92/1065) was prepared and issued to repair the condition. The work packages were signed off complete. A post-modification smoke test was performed and signed off as acceptable. On 6/10/92 during a walkdown by plant personnel, it was discovered that the repairs had not been completed. Both SGTS trains were declared inoperable which required a plant shutdown. The deficiencies were promptly corrected, and SGTS was declared operable.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

A. Reportable Occurrence

A minor modification package was issued for work during Refueling Outage 5 (RFO5) to correct discrepancies on the Standby Gas Treatment System (SGTS) [BH] identified in Material Nonconformance Report (MNCR) 0148-91. On 6/10/92 after restart from RFO5 a walkdown revealed that not all the required work had been performed. SGTS A and B subsystems were therefore declared inoperable. The actions of Technical Specification 3.0.3 were entered since the action statement for the Limiting Condition for Operation (LCO) of Technical Specification 3.6.6.3 could not be met. This condition is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

B. Initial Conditions

The plant was operating in Operational Condition 1 at approximately 37 percent power.

C. Description of Occurrence

On 5/2/92 during Refueling Outage 5 it was determined that a previously identified deficiency concerning potential secondary containment bypass leakage affected the operability of the Standby Gas Treatment System for Operational Conditions 1, 2, and 3. The details of this deficiency were reported in LER 92-011-00 on 7/6/92 as a condition outside the design basis of the plant.

A minor modification package (MCP 92/1065) was prepared and issued on 5/22/92 in order to repair potential secondary containment bypass leakage paths in the Standby Gas Treatment System.

The scope of the work packages required installation of fan shaft seals, application of sealant to all seams and joints in the pocket or shroud around the flow control vane assembly control arm, and application of sealant around the outside circumference of the seam between the fan inlet flange and the fan housing.

The work packages were signed off complete on 6/3/92 by the contractor supervisor. A post-modification smoke test was performed on 6/3/92 and signed off as acceptable by a plant system engineer. The acceptance criteria for the smoke test was minimal or no visible leakage.

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On 6/10/92 during a walkdown of the Standby Gas Treatment System by plant personnel, it was discovered that no sealant had been applied around the outside circumference of the seam inlet flange and the fan housing, and that no sealant had been applied to the shroud around the flow control vane assembly control arm. However, the shaft seals had been installed.

SGTS A and B were declared inoperable following this discovery. Since Technical Specification 3.6.6.3 actions do not allow more than one subsystem to be inoperable during Operational Condition 1, the actions of Technical Specification 3.0.3 were entered. Upon commencement of the required shutdown (Emergency Plan Emergency Action Level), an Unusual Event was declared.

The deficiencies were promptly corrected on 6/10/92, SGTS A and B subsystems were declared operable, and Technical Specification 3.0.3 was exited 2 hours 4 minutes after its entry.

The involved workers were removed from all direct plant work pending the root cause investigation.

All RF05 design change work packages performed by the contractor were reviewed to identify work items signed by the contractor supervisor involved in the event. It was verified that no additional sign-offs had been performed by the subject contract supervisor which had not also been verified by a second person.

Additionally a sample of work packages performed by other supervisors of the contractor were selected to be walked down in order to determine whether the situation was an isolated case. Results of these walkdowns indicated that no additional work was signed off as complete by the job supervisors without actually being performed.

D. Apparent Cause

A thorough investigation was conducted using the Human Performance Enhancement System methods. The following root causes were identified:

1. Verbal Communication Inadequacies: The contractor supervisor signed the work package based on several verbal communications indicating that the work had been completed and acceptably retested. The retest results were improperly relied on for determining the acceptability of work performed. The deviation from written work instructions was not communicated to the appropriate personnel; therefore, the review/approval process to evaluate the deviation was not initiated.

2. Written Communications Inadequacies: The Plant Modification and Construction Section procedures did not clearly identify the work supervisor's responsibilities for determining work acceptability in signing work document line items.

3. Work Schedule: Pressure to finish the job and allow the plant to startup on schedule was also identified as a root cause. In this case, the work control process did not ensure quality work would be performed under the high pressure circumstances associated with this emergent work item.

In addition to these root causes, other contributing factors were also identified. Development of the corrective action plan considered both root causes and contributing factors.

E. Supplemental Corrective Actions

A detailed action plan has been developed to address the identified root causes and contributing factors. Details of the corrective action plan are included in Quality Deficiency Report 0149-92.

Completed actions include: disciplinary action; and training sessions concerning verbatim compliance, shift turnover expectations, applicable procedures, and details of this event's causes and corrective actions.

Planned actions include: development of a standard concerning contractor craft performance expectations, changes in the training and certification of contractor craft, section procedure revisions, and development of management standards to control emergent unscheduled work activities in the Plant Modification and Construction work group.

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The planned actions will be completed in accordance with a schedule established and tracked by the GGNS Corrective Action Program.

F. Safety Assessment

An assessment of the potential dose consequences for secondary containment bypass leakage paths was performed and discussed in LER 92-11-00. Although the calculated doses from the design basis assessment of a postulated accident were outside 10 CFR limits, the doses from the "realistic" assessment were well within the 10 CFR limits. The partially repaired condition described in this LER involved even less potential for bypass leakage than the condition reported in LER 92-11-00. The successful smoke tests confirmed that the potential bypass leakage was much less than the 250 CFM maximum condition evaluated in the "realistic" assessment. Therefore the health and safety of the public were not compromised due to this event.

G. Additional Information

Energy Industry Identification System (EIIS) codes are identified in the text within brackets [].

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

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