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SUBJECT: LER 97-006-00: On 970527, non-performance of surveillance requirement 3.6.1.3.2 for blind flanges, was noted. Caused because misunderstanding of intent of specs existed. Added five structural assemblies for SP.W/970626 ltr.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • Richland, Washington 99352-0968

June 26, 1997
GO2-97-133

Docket No. 50-397

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: **NUCLEAR PLANT WNP-2, OPERATING LICENSE NPF-21,
LICENSEE EVENT REPORT NO. 97-006-00**

Transmitted herewith is Licensee Event Report No. 97-006-00 for WNP-2. This report is submitted in response to the reporting requirements of 10 CFR 73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Should you have any questions or desire additional information regarding this matter, please call me or Mr. Paul Inserra at (509) 377-4147.

Respectfully,

~~P~~ R. Bemis
Vice President, Nuclear Operations
Mail Drop PE20

Enclosure

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 9 7	PAGE (3) 1 of 5
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TITLE (4) **NON-PERFORMANCE OF SURVEILLANCE REQUIREMENT 3.6.1.3.2 FOR BLIND FLANGES ASSOCIATED WITH PRIMARY CONTAINMENT**

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)		
05	27	97	97	- 0 0 6	- 0 0	06	26	97	N/A		0 5 0 0 0		
											0 5 0 0 0		

OPERATING MODE (9) 5	POWER LEVEL (10) 0 0 0	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (11)									
		<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405c	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
		<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
		<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 368A)						
		<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)A							
		<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)B							
		<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
Bill Pfitzer, Licensing Engineer		AREA CODE 509	377-2419

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NFRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NFRDS

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ABSTRACT (16)
 On March 24, 1997, with the plant in Mode 1 at approximately 57% power, a Problem Evaluation Request (PER) was initiated to assess the applicability of Technical Specification Surveillance Requirement (TSSR) 3.6.1.3.2 to five structural assemblies providing a flanged pressure boundary for the Residual Heat Removal (RHR) System. TSSR 3.6.1.3.2 requires that each primary containment isolation manual valve and blind flange located outside primary containment be verified closed every 31 days. The Bases for SR 3.6.1.3.2 specifically states that this monthly check applies to isolation devices "capable of being mispositioned". In consideration of the description in the Bases it was thought that due to the permanent nature of these assemblies and the difficulties involved in mispositioning, they were not required to be verified in place every 31 days per TSSR 3.6.1.3.2.

As a corrective action for the PER, System Engineering reviewed the applicability of TSSR 3.6.1.3.2 to all blind flanges associated with primary containment. The review revealed two 2-inch conventional blind flanges which are required to be verified in place every 31 days. On May 27, 1997, with the plant in Mode 5, another PER was initiated for the two 2-inch blind flanges. After subsequent discussions with the staff concerning their interpretation of the intent of TS 3.6.1.3.2 it was later decided that the Specification applies to *all seven flanges*. As a corrective action, the applicable surveillance procedure was revised to add checks of all seven flanges. The root cause of this event was that the wording of the original Technical Specification led plant staff members to conclude the specification did not apply to permanently installed blind flanges. As of March 10, 1997, when Improved Technical Specifications were implemented at WNP-2, the intent of this Specification is clear.

This event is reported per 10CFR50.73(a)(2)(i)(B). The safety significance of this event is minimal.

LICENSE EVENT REPORT (LER) TEXT CONTINUATION

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Event Description

A Problem Evaluation Request (PER) was initiated on March 24, 1997 to assess the applicability of Technical Specification Surveillance Requirement (TSSR) 3.6.1.3.2 to five flanged structural assemblies providing a pressure boundary function for the RHR System. TSSR 3.6.1.3.2 requires that each primary containment isolation manual valve and blind flange located outside primary containment be verified closed every 31 days. The Bases for SR 3.6.1.3.2 states that this monthly check is for isolation devices "capable of being mispositioned". These flanged structural assemblies were permanently installed when five relief valves for the Steam Condensing mode of RHR [BO] were removed from the plant. They are massive steel components bolted into place on both ends and designed to be mass duplicators for the removed relief valves. These structural assemblies are not designed to be removed for any system operation or activity, nor is their removal directed by any plant procedure. Further, administrative work controls in place at WNP-2 prevent mispositioning of these structural assemblies without reviewed and approved work instructions. Therefore, as permanent plant components with several significant physical and administrative barriers to prevent repositioning, it is unlikely they would ever be mispositioned.

In consideration of the description in the Bases for SR 3.6.1.3.2, it was thought that due to the permanent nature of these assemblies and the difficulties involved in mispositioning, they were not required to be verified in place every 31 days per TSSR 3.6.1.3.2. Nonetheless, as a conservative measure to avoid future confusion concerning this issue, the five flanged structural assemblies were added to the applicable surveillance procedure.

As a corrective action for the PER, System Engineering reviewed the applicability of TSSR 3.6.1.3.2 to all blind flanges located outside containment that provide primary containment isolation. The review revealed that two 2-inch conventional blind flanges located in the overhead spaces of the RHR pump rooms have not been verified in place every 31 days per the requirement. Another PER was then generated to determine the applicability of TSSR 3.6.1.3.2 to the two 2-inch flanges.

In subsequent discussions with plant Licensing personnel it was first thought, due to the inaccessibility of the two blind flanges and resultant physical and administrative difficulties in mispositioning them, the requirement to check them in place every 31 days did not apply. After further discussions with the staff concerning their interpretation of the intent of TS 3.6.1.3.2 it was later decided that the Specification applies to *all seven flanges* and they should have been verified in place every 31 days.

This event is reported per 10CFR50.73(a)(2)(i)(B).

Immediate Corrective Action

As a result of the PER written on March 21, 1997, a conservative measure was taken to add the five structural assemblies to the applicable surveillance procedure. This action was taken to avoid future confusion concerning this issue despite our determination at the time that TSSR 3.6.1.3.2 did not apply to the five structural assemblies.

A review of all blind flanges located outside primary containment and providing a primary containment function was completed to ensure they are surveilled as required.

A PER was initiated for the two 2-inch blind flanges found as a result of the review.

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Further Evaluation

The initial determination that the two 2-inch blind flanges and five structural assemblies were not required to be verified in place every 31 days was documented on Reportability Evaluation 297-0233 which was shared with the staff. This Reportability Evaluation has since been revised to identify a violation of TSSR 3.6.1.3.2. In subsequent discussions with the staff the Supply System agreed to remove the words "capable of being mispositioned" from the Bases for SR 3.6.1.3.2 so that in the future it will be clear that the population of blind flanges to be surveilled is not limited to only those flanges capable of being mispositioned.

Root Cause

Although numerous reviews were completed per the requirements of the plant modification process when these flanges were added to the plant, it was not recognized that the Technical Specification for checking blind flanges every 31 days applied to these seven flanges. Therefore, no revision was initiated to add these flanges to the surveillance procedure for checking containment blind flanges.

After review of the Technical Specification existing at the time the flanges were installed, it is realized that some misunderstanding of the intent of the Specification existed. The Technical Specification LCO 3.6.1.1 existing at the time, read as follows:

"PRIMARY CONTAINMENT INTEGRITY shall be demonstrated:

At least once per 31 days by verifying that all primary containment penetrations not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in position..."

Also, in Technical Specification LCO 3.6.3, it stated:

"With one or more primary containment isolation valve(s) shown in Table 3.6.3-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and within 4 hours.....isolate each affected penetration by use of at least one closed manual valve or blind flange."

These specifications were interpreted to require that if an automatic containment isolation valve was not operable, and its isolation function was replaced with a temporary blind flange, then the blind flange shall be verified in place every 31 days. The intent of this requirement was thought to be to verify isolation devices temporarily in place to serve the isolation function of an inoperable primary containment isolation valve (PCIV)[ISV]. The plant modifications to install these seven flanges were implementing permanent plant changes, and therefore it was thought the original TSSR did not apply.

The root cause of this event was that the wording of the original Technical Specification led plant staff members to conclude it did not apply to permanently installed blind flanges.

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Further Corrective Actions

As of March 10, 1997 when Improved Technical Specifications were implemented at WNP-2, the Specification wording for this surveillance requirement is clear. The TSSR 3.6.1.3.2 now states:

"Verify each primary containment isolation manual valve and blind flange that is located outside primary containment and is required to be closed during accident conditions is closed, every 31 days."

The applicable surveillance procedure was revised to add checks of the two 2-inch blind flanges, similar to the checks of the five structural flanges which had been added previously.

The words "capable of being mispositioned" will be removed from the Bases for SR 3.6.1.3.2 such that, in the future, it will be clear that the population of blind flanges to be surveilled *is not* limited to only those flanges capable of being mispositioned.

Assessment of Safety Consequences

The five flanged structural assemblies are massive steel components bolted into place on both ends and designed to be mass duplicators for the removed RHR Steam Condensing Mode relief valves. Four of the structural assemblies involved were put into place prior to initial plant startup. Each assembly weighs approximately 1200 lbs and is held in place on both ends by a total of 34 fasteners. One of the structural assemblies was put in place when RHR-RV-36 was permanently removed in 1993. It weighs approximately 200 lbs and is also held in place on both ends by a total of 20 fasteners. These assemblies are not designed to be removed for any system operation or activity, nor is their removal directed by any plant procedure. Further, administrative work controls in place at WNP-2 prevent mispositioning of these assemblies without reviewed and approved work instructions. The work package review required to remove these assemblies requires that a senior reactor operator assigned to work control, the system engineer, a rigging engineer and the Control Room Supervisor/Shift Manager review the plan prior to the start of work. Therefore, as permanent plant components with several significant physical and administrative barriers to prevent repositioning, it is unlikely they would ever be mispositioned. Mispositioning of any of these five structural assemblies would result in a large hole in primary containment and would make it extremely difficult to inert containmant.

Inadvertent mispositioning of the two 2-inch flanges is unlikely because, similar to the five structural flanges, there are no plant procedures directing repositioning, and it would require intentional circumvention of the plant work control processes. Additionally, it would require construction of scaffolding to access the blind flanges in the overhead of the RHR room. If the flanges were not in place RHR room flooding would occur when the corresponding RHR loop is operated in full flow test or suppression pool cooling modes, or when the system is being operated for its surveillance test. These factors combine to make it very unlikely the flanges would be mispositioned, and if mispositioned, could remain in that configuration for an extended period.

There is no evidence that any of these flanges were ever mispositioned.

Based on the above analysis, the safety significance of this event is minimal.

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Previous Similar Events

LER 93-010, associated with the Technical Specification Surveillance Improvement Program (TSSIP) reported several items of non-compliance with the Technical Specification Surveillance Testing Program. The root cause of many of the TSSIP issues, as with this LER, involved a misunderstanding or misinterpretation of the existing surveillance requirement. Due to the wording of this specification in the previous Technical Specification which seemed to specify that only those blind flanges temporarily replacing inoperable PCIIVs need be surveilled, the TSSIP could not be expected to have corrected this problem. Since that time WNP-2 has implemented Improved Technical Specifications which clarifies the intent of the specification.