ENERGY NORTHWEST

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November 29, 1999
GO2-99-205

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21, LICENSEE EVENT REPORT NO. 1999-002-00**

Transmitted herewith is Licensee Event Report No. 1999-002-00 for WNP-2. This report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) and discusses items of reportability, corrective action taken, and action to preclude recurrence.

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

Respectfully,

RL Webring
Vice President, Operations Support/PIO
Mail Drop PE08

Attachment

cc: EW Merschoff - NRC-RIV
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IE22

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Washington Nuclear Plant - Unit 2	50-397	1 OF 3

TITLE (4)

Operation or condition prohibited by WNP-2 Technical Specifications due to a missed surveillance

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	27	1999	1999	002	00	11	29	1999	FACILITY NAME	DOCKET NUMBER

OPERATING MODE	1
POWER LEVEL	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	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
	20.405(a)(1)(iii)	X	50.73(a)(2)(i)(B)		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 (Include Area Code)
F. A. Schill, Licensing Technical Specialist	(509) 377-2269

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
E	IJ	CNV	FUJI	N					

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED	MONTH	DAY	YEAR
	YES (If yes, completed EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT:

On October 27, 1999 at 1300 hours, with the plant in Mode 1 at 100 percent power, plant operators questioned a discrepancy between indicated drywell identified leakage rate and the value of drywell identified leakage rate measured by an alternate method. Upon further investigation plant staff determined that the identified leakage rate signal to the control room indicating instrument was not being received because its signal converter was de-energized. Further investigation determined this condition existed since the signal converter batteries discharged after power was removed during an electrical bus maintenance period in the R-14 refueling outage. Total drywell leakage is required to be verified within specified limits every 12 hours in modes 1, 2, or 3 pursuant to Technical Specification Surveillance Requirement (SR) 3.4.5.1. Control room operators at WNP-2 used the erroneous indication to calculate total drywell leakage from the time the plant entered the mode of applicability for SR 3.4.5.1 on 10/22/99, until the de-energized instrument was discovered on 10/27/99.

The cause of the signal converter failure is inadequate interface between project engineers and procedure writers during the design change process resulting in inadequate procedure revisions to be implemented.

Upon discovery of this condition, corrective action was taken to restore power to the signal converter at which time the correct drywell identified leakage indication was immediately observed on the control room indicator.

There were no adverse safety consequences associated with the lapse of identified leakage rate indication. Although the requirement of SR 3.4.5.1 to verify total leakage rate within the limit was not met during this period, the absence of the identified leakage sump fill rate monitor alarm and recorded unidentified leakage rate indicate that the limit for total leakage of 25 gpm in a 24 hour period was not exceeded.

Event Description

On October 27, 1999 at 1300 hours, with the plant in Mode 1 at 100 percent power, a discrepancy was observed between drywell identified leakage rate as indicated on a control room recorder and the value for drywell identified leakage rate measured by alternate means. Upon further investigation it was determined that the identified leakage rate signal to the control room recorder was not being provided because its signal converter was de-energized. Further evaluation indicated this condition existed since the signal converter's batteries had discharged during the time its supplying electrical bus was de-energized during the R-14 refueling outage.

On 10/22/99, WNP-2 entered the mode of applicability for Technical Specification Surveillance Requirement (SR) 3.4.5.1 during power ascension following refueling outage R-14. With the plant in modes 1, 2, or 3, Limiting Condition for Operation (LCO) 3.0.1 requires LCO 3.4.5 Reactor Coolant System (RCS) Operational Leakage to be met. SR 3.4.5.1 requires verification every 12 hours that total leakage rate into the drywell is less than or equal to 25 gallons per minute (gpm) averaged over the previous 24-hour period. Total leakage rate is determined by totaling identified leakage rate from the Drywell Equipment Drains (EDR) and unidentified leakage rate from the Drywell Floor Drains.

Records indicate the control room operators performed the procedure that implements SR 3.4.5.1 within the required frequency intervals during the modes of applicability. However, the erroneous data for identified leakage rate was used during these performances to determine total RCS operational leakage.

Immediate Corrective Action

Immediate corrective action was taken to re-energize the signal converter by turning its power switch on. When this was done, the correct drywell identified leakage indication was immediately observed on the control room recorder. The restored indication was then verified to be correct by correlation with the results of a measurement of drywell identified leakage flow rate by alternate means.

Further Evaluation

By design, the signal converter requires its power switch to be turned on to restore operation whenever the backup batteries are discharged following power interruption. The signal converter is powered by Nickel-Cadmium batteries that are continuously charged by an AC to DC adapter during normal operation. When the AC power to the adapter was secured on 10/2/99 during the electrical bus outage, the batteries continued to power the converter until battery voltage dropped below the minimum threshold at which time the converter automatically turned off. With the plant shutdown during R-14, the electrical bus was re-energized on 10/4/99. At this time, the converter batteries automatically recharged and the converter then required its power switch to be turned on in order to resume functioning.

Supplement 1 to Generic Letter (GL) 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping", dated February 4, 1992, indicates that it is not only necessary to verify leakage to be within limits, but that the intention of the SR is also to quantitatively measure leakage rate. The Generic Letter 88-01 supplement discusses the allowed outage time for leakage rate measurement instruments and indicates that it is necessary to ensure the capability to quantitatively measure leakage is not lost because this capability is essential for safe plant operation.

This condition was determined to be reportable because the time that the leakage instrument was not functioning but was relied upon to calculate total leakage exceeded the SR interval plus the SR 3.0.2 extension plus the LCO action completion time. This condition meets the reporting criteria of 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by the plant's Technical Specifications. The condition was determined to meet reportability criteria of NUREG-1022 revision 1 because there is firm evidence the discrepancy existed prior to the time of discovery.

Root Cause

The cause of the signal converter failure is inadequate interface between project engineers and procedure writers during the design change process. The potential problems associated with power loss, battery failure, and subsequent restoration were recognized prior to installation. This design feature was not adequately communicated to procedure authors when they were tasked to prepare procedure revisions to implement the design change. This resulted in procedures that did not contain instructions to turn on the signal converter following power restoration.

Further Corrective Action

The restoration procedures for the electrical bus that provides power to the signal converter will be revised to require manual reset of the flow signal converter following power restoration.

The administrative procedure governing design changes will be revised to require formalized correspondence between project engineers and procedure authors containing specific details regarding design changes.

Assessment of Safety Consequences

The erroneously indicated EDR leakage rate for the 5-day period between 10/22/99 and 10/27/99 did not present any adverse safety consequences. Other alarms were operable during this period that would have alerted the operators if the identified leakage rate approached the limit for total leakage specified in LCO 3.4.5. The EDR sump fill rate monitor alarm actuates when the leakage rate exceeds 15.5 gpm. Records indicate that during the time the EDR indication was erroneous, FDR leakage was always less than 5 gpm. Therefore, total drywell leakage did not exceed the LCO 3.4.5 limit of 25 gpm. Proper function of the EDR sump fill rate monitor alarm was verified subsequent to restoration of the EDR leakage instrumentation.

Similar Events

There have been no events in the last two years in which inadequate communications between personnel implementing a design change resulted in failure to meet a Technical Specification surveillance requirement.