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SUBJECT: LER 88-033-00: on 880907, missed control room emergency
 filtration sys Tech Spec surveillance.

W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Washington Nuclear Plant - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 13 19 17										PAGE (3) 1 OF 016	
TITLE (4) Missed Control Room Emergency Filtration System Technical Specification Surveillance Due to Personnel Error																					
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)							
09	07	88	88	033	00	10	07	88						0 5 0 0 0							
OPERATING MODE (9) 4		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																			
POWER LEVEL (10) 0 0 0		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)							
		20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)							
		20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
		20.405(a)(1)(iii)				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)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME S.L. Washington, Compliance Engineer										TELEPHONE NUMBER 5 10 19 317 7 1-12 101810											
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs											
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												EXPECTED SUBMISSION DATE (15)									
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On September 7, 1988 a Plant Engineer determined that WNP-2 Plant Technical Specification Surveillance 4.7.2.e.2 had not been performed since Plant Startup (December, 1983). Surveillance 4.7.2.e.2 requires verification every 18 months that the Control Room Emergency Filtration System, on an actuation signal, automatically switches to the pressurization mode and that Control Room pressure is maintained at a plus 1/8 inch water gauge with a flow rate of less than or equal to 1000cfm.

The cause of this event is personnel error. Prior to Plant Startup, engineers were assigned to write procedures, with technical specification surveillances being assigned to a specific procedure. The engineer assigned the procedure, which was to include surveillance 4.7.2.e.2, mistakenly thought this surveillance requirement was going to be included in the associated logic system functional test procedure. The effect was that the surveillance was not done from Plant Startup to September 8, 1988. There was no effect on Control Room Emergency Filtration System performance since preoperational test data shows that all surveillance requirements, except for one, were met prior to plant startup. In addition, when the surveillance was performed on September 8, 1988 all requirements were met. The preoperational test acceptance criteria for flow was 1000 +/- 100cfm and one flow was measured at 1003cfm, which is 3cfm over the technical specification limit. The 1000cfm limit is to assure charcoal and HEPA filtering and dose limits are within the WNP-2 design bases. As a result, the additional 3cfm would have been negligible.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 1 7	8 8	— 0 3 3	— 0 0	0 2	OF	0 5

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

Abstract (Cont'd)

Corrective actions included writing and performing a temporary surveillance procedure, and placing caution tags on the volume dampers to ensure the 1000 or less cfm damper position is maintained. An additional corrective action will be to review the Control Room Emergency Filtration System Technical Specification Surveillance List to ensure all required surveillances are included in the assigned procedure.

A contributing cause was ineffective periodic procedure reviews. Reviewers were not required by procedure to verify that each procedure included all assigned technical specification requirements. The effect was that previous Plant reviews of the procedure did not discover the missed technical specification surveillance requirement. A requirement will be added to the biennial procedure review procedure to verify that all technical specification requirements are included in the assigned procedure.

There is no safety significance associated with this event since system performance verified prior to Plant Startup (December, 1983) met the surveillance requirements. Also, performance of the surveillance on September 8, 1988 verified that the Plant configuration and system performance still met the surveillance requirements.

Plant Conditions

- a) Power Level - 0%
- b) Plant Mode - 4 (Cold Shutdown)

Event Description

On September 7, 1988 a Plant Engineer determined that WNP-2 Plant Technical Specification Surveillance Requirement 4.7.2.e.2 had not been performed as required. The engineer was reviewing the surveillance requirements as a result of a request made by the Assistant Plant Manager during a Startup Plant Operating Committee (POC) meeting. The request was made as a result of discussions related to maintaining the Control Room Heating and Ventilation (HVAC) System in the pressurization mode of operation. The circumstances relating to the pressurization mode of operation are described in Licensee Event Report 88-31-00.

WNP-2 Plant Technical Specification Surveillance Requirement 4.7.2.e.2 requires verification once every 18 months that the Control Room Emergency Filtration System part of the Control Room HVAC System automatically switches to the pressurization mode on an actuation signal, and that the control room is maintained at a minimum positive pressure of 1/8 inch water gauge at a flow rate of less than 1000cfm. The Control Room Emergency Filtration System has two redundant trains (Trains A and B).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	8 8	0 3 3	0 0	0 3	OF	0 5

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Prior to Plant Startup (December, 1983) a Technical Specification Surveillance List was developed. This list correlates each technical specification surveillance requirement with a Plant procedure. Individuals assigned to write the procedures at that time were given a list of technical specification surveillance requirements to be included in each procedure. In the case of this surveillance, the procedure author apparently thought the pressurization and flow measurements would be included in a logic system functional test procedure. Although the logic system functional test procedure (PPM 7.4.3.2.2.11) does include a section to verify the System isolations associated with the actuation signals, the procedure does not include the required pressure and flow measurements. The requirement to verify the 1/8 inch water gauge pressure at less than 1000cfm flow should have been included in the assigned procedure (PPM 7.4.7.2.5).

Immediate Corrective Action

On September 8, 1988 a temporary procedure (TP 7.4.7.2.8) was written and performed. All surveillance requirements were met. (See Further Evaluation below.)

Each volume damper was cautioned tagged at a setting that limits the train flow to less than 1000cfm. This will ensure that prior to adjusting these dampers appropriate measures are taken to restore or maintain the damper at a proper setting.

Further Evaluation and Corrective ActionA. Further Evaluation

This event is reportable per 10CFR50.73(a)(2)(i)(B). A condition prohibited by the WNP-2 Plant Technical Specifications.

There were no structures, system, or components inoperable prior to this event which affected the event. Performance of the temporary procedure verified the capability of the Control Room Emergency Filtration System to meet the surveillance requirements; however, by technical specification requirements (surveillance not performed within required time limit), the Control Room HVAC pressurization mode was technically inoperable.

A review of Plant Preoperational Tests for the Control Room HVAC System showed that just prior to Plant Startup in October and December 1983 all requirements of Technical Specification 4.7.2.e.2 were verified at the time the requirement was 4.7.2.e.3 and the original 4.7.2.e.2 was deleted in Technical Specification Amendment 36. All isolations associated with the actuation signals were verified, and Control Room pressure and train flow were verified. At that time, volume dampers were installed in each train so that the train flow could be reduced. The actual measured flows were 1003cfm for train "A" and 999cfm for train "B". The acceptance criteria for the preoperational test was 1000cfm +/- 100cfm. Although Train "A" was higher than the technical specification maximum train flow limit, the additional 3cfm flow would have had a negligible impact on System performance in meeting design basis filtering and dose levels.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	8 8	— 0 3 3	— 0 0	0 4	OF	0 5

TEXT (If more space is required, use additional NRC Form 365A's) (17)

On September 24, 1988 during the performance of Technical Specification Surveillance 4.7.2.g. The volume damper of train "A" had to be opened in order to meet the surveillance flow requirement of 900 to 1000cfm. The Control Room Emergency Filtration System lineup for this surveillance is the same as the pressurization and flow surveillance performed September 8, 1988; however, the train flow was measured at a different location. The initial performance of the temporary procedure measured Train "A" flow as 1200cfm and the volume damper was adjusted to decrease train flow to less than 1000cfm. The location used to measure flow during the September 8, 1988 surveillance is near an elbow and, as a result, the flow is turbulent. The location used to measure flow on September 24, 1988 is a better indicator of actual train flow. Since the flow damper had to be opened past the pre-event position and flow was still measured to be less than 1000cfm, the 1200cfm initially measured on September 8, 1988 was in error. Accordingly Train "A" flow was always less than 1000cfm.

The cause of this event appears to be a lack of communication between the assigned procedure author and the author of the logic system functional test procedure. However, since the assigned author left the Supply System after Plant Startup, this can not be verified. The root cause is personnel error in that the assigned procedure author did not include the pressure and flow measurements in the assigned procedure. Plant procedures were not the cause of this event.

A contributing cause was ineffective periodic procedure reviews. There was no procedure requirement to verify the Technical Specification Surveillance List requirements were incorporated into the assigned procedure.

B. Further Corrective Actions

1. The temporary procedure will be incorporated into a Plant procedure.
2. The Control Room Emergency Filtration System Technical Specification Surveillance List requirements will be reviewed and incorporation into applicable Plant procedures verified. This review will not include the Standby Gas Treatment System (SGT) since a similar review was performed in August, 1988. The review verified that all SGT surveillance requirements were included in Plant procedures.
3. A requirement will be added to PPM 1.2.6, "Biennial Review of Plant Procedures", to require the procedure sponsor (organization) to review the procedure against the Technical Specification Surveillance List to ensure that the procedure includes all required surveillances.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER				
Washington Nuclear Plant - Unit 2	0 5 0 0 0 3 9 7	8 8	0 3 3	0 0	0 1 5	OF	0 5	

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

Safety Significance

The purpose of Technical Specification 3/4.7.2 is to assure the Control Room Emergency Filtration System is operable and capable of maintaining Control Room habitability during a design basis accident. Control Room pressurization assures that only monitored and filtered air enters the Control Room during emergency conditions. Maintaining system flow at less than 1000cfm assures charcoal and HEPA filtering effectiveness and dose levels within the WNP-2 design basis. Pre-operational tests demonstrated system performance which met the technical specification system performance requirements, with one minor exception. The surveillance tests performed on September 8, 1988 verified Control Room pressurization requirements. Results of a subsequent technical specification surveillance show that current volume damper setting limits flow to less than 1000cfm. Since the current volume damper setting provides more flow than the pre-event volume damper setting the pre-event flow was less than 1000cfm. Therefore, the Plant configuration and system performance met the technical specification requirements throughout the event period and; as a result, this event had no safety significance. In addition, no actual incident occurred which affected Control Room habitability during this event period. Accordingly, this event had no effect on the health and safety of the public or Plant personnel.

Similar Events

87-023

EIIS InformationText ReferenceEIIS Reference

Control Room Emergency Filtration System (Train A and B)
Control Room
Charcoal Filter
HEPA Filter
Volume Damper
Control Room Heating and Ventilation (HVAC) System
Standby Gas Treatment (SGT) System

System	Component
VH	- - - - -
ME	Room
VH	FLT
VH	FLT
VH	CDMP
VH	- - - - -
BH	- - - - -

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

Docket No. 50-397

October 7, 1988

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 88-033

Dear Sir:

Transmitted herewith is Licensee Event Report No. 88-033 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,



C.M. Powers (M/D 927M)
WNP-2 Plant Manager

CMP:lg

Enclosure:
Licensee Event Report No. 88-033

cc: Mr. John B. Martin, NRC - Region V
Mr. C.J. Bosted, NRC Site (M/D 901A)
INPO Records Center - Atlanta, GA
Ms. Dottie Sherman, ANI
Mr. D.L. Williams, BPA (M/D 399)

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11