

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8904280198 DOC. DATE: 89/04/13 NOTARIZED: NO DOCKET #
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Power 05000397
 AUTH. NAME AUTHOR AFFILIATION
 DAVISON, W.S. Washington Public Power Supply System
 POWERS, C.M. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-006-00: on 890316, entry into Tech Spec 3.0.3. Caused by
 discovery of calculation errors. W/890413 ltr.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR ENCL SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
PD5 LA	1 1	PD5 PD	1 1
SAMWORTH, R	1 1		
INTERNAL: ACRS MICHELSON	1 1	ACRS MOELLER	2 2
ACRS WYLIE	1 1	AEOD/DOA	1 1
AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
DEDRO	1 1	IRM/DCTS/DAB	1 1
NRR/DEST/ADE 8H	1 1	NRR/DEST/ADS 7E	1 0
NRR/DEST/CEB 8H	1 1	NRR/DEST/ESB 8D	1 1
NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1
NRR/DEST/MTB 9H	1 1	NRR/DEST/PSB 8D	1 1
NRR/DEST/RSB 8E	1 1	NRR/DEST/SGB 8D	1 1
NRR/DLPQ/HFB 10	1 1	NRR/DLPQ/QAB 10	1 1
NRR/DOEA/EAB 11	1 1	NRR/DREP/RPB 10	2 2
NRR/DRIS/SIB 9A	1 1	NUDOCS-ABSTRACT	1 1
<u>REG FILE</u> 02	1 1	RES/DSIR/EIB	1 1
RES/DSR/PRAB	1 1	RGN5 FILE 01	1 1
EXTERNAL: EG&G WILLIAMS, S	4 4	FORD BLDG HOY, A	1 1
L ST LOBBY WARD	1 1	LPDR	1 1
NRC PDR	1 1	NSIC MAYS, G	1 1
NSIC MURPHY, G. A	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 44 ENCL 43

Alc 4/13



١٧٧

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 0 4																													
TITLE (4) Entry Into Technical Specification 3.0.3 Caused By Discovery Of Calculation Errors In Post LOCA Integrated Control Room Dose																																																	
EVENT DATE (5) 0 3 1 6 8 9 8 9 0 0 6 0 0 4 1 3 8 9										LER NUMBER (6) 20.402(b) 20.405(a)(1)(i) 20.405(a)(1)(ii) 20.405(a)(1)(iii) 20.405(a)(1)(iv) 20.405(a)(1)(v)										REPORT DATE (7) 20.405(c) 50.36(c)(1) 50.36(c)(2) 50.73(a)(2)(i) 50.73(a)(2)(ii) 50.73(a)(2)(iii)										OTHER FACILITIES INVOLVED (8) FACILITY NAMES DOCKET NUMBER(S) 0 5 0 0 0 0 0 5 0 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 7 8										<input type="checkbox"/> 20.402(b)										<input type="checkbox"/> 20.405(c)										<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"/> 50.36(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"/> 50.36(c)(2)										<input type="checkbox"/> 50.73(a)(2)(vi)										<input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
										<input checked="" type="checkbox"/> 20.405(a)(1)(iii)										<input type="checkbox"/> 50.73(a)(2)(i)										<input type="checkbox"/> 50.73(a)(2)(vii)(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)																																																	
NAME W.S. Davison, Compliance Engineer																				TELEPHONE NUMBER 5 1 0 9 3 7 7 7 1 2 5 0 1 1																													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) X 2726																																																	
CAUSE										SYSTEM										COMPONENT										MANUFACTURER										REPORTABLE TO NRC									
SUPPLEMENTAL REPORT EXPECTED (14)																																																	
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)																				<input type="checkbox"/> NO										EXPECTED SUBMISSION DATE (15)																			
																														0 7 3 1 0 8 9																			

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

On March 16, 1989, during a review of the WNP-2 Final Safety Analysis Report (FSAR) being performed by Supply System engineering personnel as a result of the submission of a proposed Technical Specification amendment, an error was discovered in the calculation for dose received by Control Room operators during a Loss of Coolant Accident (LOCA). The plant was currently limited to 78% power due to an inoperable Main Steam Isolation Valve which resulted in the ability to utilize only three of the four main steam lines. The error was such that the ability to stay within the limits of design basis for dose to the operators was not able to reasonably assured. As result of the potential inoperability of the Control Room Emergency Filtration System, Technical Specification LCO Action Statement 3.0.3 was entered, an Emergency Classification of Unusual Event was declared and a controlled shutdown was initiated. Due to the results of additional evaluation and institution of compensatory measures, the shutdown was terminated at 52% power as the plant was considered to be within design basis requirements. In addition to the power reduction, compensatory measures were initiated to recover the operable condition of the Control Room Emergency Filtration systems. LCO Action Statement 3.0.3 was exited and the Emergency Classification of Unusual Event was terminated. Subsequent reviews of the dose projection model discovered additional errors of sufficient magnitude to conclude that control room personnel would be provided sufficient protection post LOCA. There is no safety significance associated with this event as subsequent evaluation demonstrated the ability of the WNP-2 design to function adequately during post LOCA conditions and the existing plant operating conditions of 78% power.

8904280198 890413
PDR ADDCK 05000397
S PNU

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 9	— 0 0 6	— 0 0 0	0 2	OF	0 4

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

Plant Conditions

- a) Plant Mode - 1 (Power Operation)
b) Power Level - 78% (The plant was limited to 78% power due to an inoperable Main Steam Isolation Valve which resulted in the ability to utilize only three of the four main steam lines.)

Event Description

On March 16, 1989, during a review of the WNP-2 Final Safety Analysis Report (FSAR) being performed by Supply System engineering personnel, as a result of the submission of a proposed Technical Specification amendment, an error was discovered in the calculation for dose received by Control Room operators during a Loss of Coolant Accident (LOCA). It was discovered that WNP-2 Calculation NE-02-88-27 Rev. 0 assumes 100% mixing of leakage from the Primary Containment into the Secondary Containment atmosphere. A review of the FSAR identified a previous commitment to Regulatory Guide 1.3 Rev. 2 in conjunction with the statement that an alternate atmosphere dispersion and dilution methodology was used. Regulatory Guide 1.3 Rev. 2 specifies a 0% mixing criteria for use in determination of dose received by control room personnel. The Regulatory Guide does permit the use of mixing, but not without prior NRC approval. An examination of the WNP-2 calculation based on 100% mixing revealed that no exception had been requested or granted by the NRC to the Regulatory Guide 1.3 Rev. 2 requirement for 0% mixing. Thus, the ability of the Control Room Emergency Filtration System to perform its intended function to keep the control room within the limits of design basis for thirty day integrated dose to the control room operators during and after a LOCA was not able to be reasonably assured without performing additional calculations to determine the magnitude of the effect.

Immediate Corrective Action

After evaluation and direction by Plant Management, the following actions were taken:

1430 Hours - The NRC Bethesda Operations Center was notified of the occurrence of this event as a one-hour non-emergency event per the requirements of 10CFR50.72(b)(1)(ii)(B).

1454 Hours - Technical Specification LCO 3.0.3 was entered and a controlled shutdown was commenced. This action was taken as a result of the determination by the Plant Operations Committee that the Plant was operating in an unanalyzed condition due to the Control Room Emergency Filtration System being potentially unable to achieve its design function and therefore not able to meet the requirements of Technical Specification 3.7.2 "Control Room Emergency Filtration System."

1520 Hours - The Shift Manager declared an Emergency Classification of Unusual Event.

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 9	- 0 0 6	- 0 0 0	13	OF	0 4

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

1529 Hours - As a compensatory measure, the South Control Room Ventilation Remote Air Intake (ROA-V-52B) was opened to supply additional dilution of any intake source with additional clean air. The North Control Room Ventilation Remote Air Intake (ROA-V-52A) was left in the open position.

1530 Hours - NRC Bethesda Operations Center was notified of the Emergency Classification.

1651 Hours - Additional analysis was completed which established the capability to meet the FSAR commitment to Regulatory Guide 1.3 with reactor power equal to or less than 52% equilibrium conditions.

1720 Hours - The shutdown was halted at a reactor power level of 52%.

1840 Hours - Technical Specification Action Statement 3.0.3 was exited based upon the following compensatory measures:

1. Both Control Room Remote Air Intakes must remain open.
2. At least a positive one-eighth inch water gauge pressure must be maintained in the Control Room.
3. An operator was dedicated to respond within 20 minutes to close one of the Remote Air Intakes in the case of high radiation and briefed on his responsibilities.
4. The system operating procedure was modified to reflect the new restrictions.
5. Reactor Power was limited to the levels approved by current analysis.

1854 Hours - The Emergency Classification of Unusual Event was terminated.

Further Evaluation and Corrective ActionFurther Evaluation

1. This LER is written to document this event as reportable per the requirements of 10CFR50.73(a)(2)(i)(B) "Any operation or condition prohibited by the plant's Technical Specification ..."
2. The Control Room personnel dose calculation has not been finalized. Completion of the calculation will determine compliance at 100% power and enable completion of the reportability evaluation of this event. A supplemented LER will be written to document the results of the calculation.
3. There were no structures, components or systems that were inoperable prior to start of this event which contributed to the event.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Washington Nuclear Plant - Unit 2	05000397	89	006	00	4	OF 04

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

4. Since the additional evaluation of the control room dose calculations resulted in the confirmation of the ability to return the plant to 78% power, it was concluded that the entry into Technical Specification Action Statement 3.0.3 on March 16, 1989, was not necessary and was a conservative action. The decision to enter Technical Specification 3.0.3 was based on the conclusion that the power plant was being operated in a condition that exceeded the Control Room Emergency Filtration Systems ability to maintain control room personnel dose within the design limits.

Further Corrective Actions

1. A formal root cause investigation is in progress. Any substantive corrective actions which develop as a result of this effort will be reported in a supplemental LER.

Safety Significance

There is no safety significance associated with this event as it involved errors in calculations which, through additional evaluation, were shown to contain overly conservative assumptions. Removal of the unnecessary conservatism resulted in proving the capability of the WNP-2 Control Room Emergency Filtration System design to assure that the thirty day integrated dose received by control room operators as a result of a LOCA was consistent with the requirements of 10CFR50 Appendix A General Design Criterion 19 and the methodology required by Reg. Guide 1.3 Rev. 2 and the Standard Review Plan Section 6.2.

Similar Events

LER 86-036-01 "Failure to Perform Division One 4.16 KV Emergency Bus Undervoltage Degraded Voltage Protection Technical Specification Surveillance Due to Inadequate Procedure" documented an event which involved entry into Technical Specification Action Statement 3.0.3.

EIIS Information

Text Reference

ROA-V-52B
ROA-V-52A
Primary Containment
Secondary Containment

EIIS Reference

System	Component
VA	V
VA	V
NH	- - - -
NG	- - - -

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

Docket No. 50-397

April 13, 1989

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 89-006

Dear Sir:

Transmitted herewith is Licensee Event Report No. 89-006 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

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

CMP:lg

Enclosure:
Licensee Event Report No. 89-006

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)

IE-2
1/1