

March 10, 2003

10 CFR 50.73

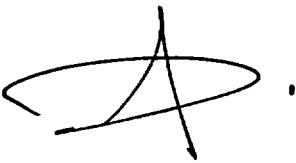
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

PALISADES NUCLEAR PLANT
DOCKET 50-255
LICENSE NO. DPR-20
LICENSEE EVENT REPORT 03-001, INOPERABLE STEAM GENERATOR
LOW-LEVEL CHANNELS

Licensee Event Report (LER) 03-001 is attached. The LER describes the discovery that all four steam generator reactor protection system low-level trip setpoints in each steam generator were set such that the trip could occur below the allowable value specified in Technical Specification 3.3.1. This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

SUMMARY OF COMMITMENTS

This letter contains no new commitments and no revisions to existing commitments.



Douglas E. Cooper
Site Vice-President, Palisades

CC Regional Administrator, USNRC, Region III
Project Manager, USNRC, NRR
NRC Resident Inspector, Palisades

Attachment

JE22

NRC FORM 366 (7-2001)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004 Estimated burden per response to comply with this mandatory information collection request 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U S Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to: bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)		

1. FACILITY NAME PALISADES NUCLEAR PLANT	2. DOCKET NUMBER 05000255	3. PAGE 1 OF 3
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4. TITLE
INOPERABLE STEAM GENERATOR LOW-LEVEL CHANNELS

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	15	2003	2003	- 001	- 00	03	10	2003	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check all that apply)								
10. POWER LEVEL	100	<input type="checkbox"/> 20 2201(b)	<input type="checkbox"/> 20 2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50 73(a)(2)(ix)(A)					
		<input type="checkbox"/> 20 2201(d)	<input type="checkbox"/> 20 2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50 73(a)(2)(x)					
		<input type="checkbox"/> 20 2203(a)(1)	<input type="checkbox"/> 50 36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 73 71(a)(4)					
		<input type="checkbox"/> 20 2203(a)(2)(i)	<input type="checkbox"/> 50 36(c)(1)(ii)(A)	<input type="checkbox"/> 50 73(a)(2)(v)(A)	<input type="checkbox"/> 73 71(a)(5)					
		<input type="checkbox"/> 20 2203(a)(2)(ii)	<input type="checkbox"/> 50 36(c)(2)	<input type="checkbox"/> 50 73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A					
		<input type="checkbox"/> 20 2203(a)(2)(iii)	<input type="checkbox"/> 50 46(a)(3)(ii)	<input type="checkbox"/> 50 73(a)(2)(v)(C)						
		<input type="checkbox"/> 20 2203(a)(2)(iv)	<input type="checkbox"/> 50 73(a)(2)(i)(A)	<input type="checkbox"/> 50 73(a)(2)(v)(D)						
		<input type="checkbox"/> 20 2203(a)(2)(v)	<input checked="" type="checkbox"/> 50 73(a)(2)(i)(B)	<input type="checkbox"/> 50 73(a)(2)(vii)						
<input type="checkbox"/> 20 2203(a)(2)(vi)	<input type="checkbox"/> 50 73(a)(2)(i)(C)	<input type="checkbox"/> 50 73(a)(2)(viii)(A)								
<input type="checkbox"/> 20 2203(a)(3)(i)	<input type="checkbox"/> 50 73(a)(2)(ii)(A)	<input type="checkbox"/> 50 73(a)(2)(viii)(B)								

12. LICENSEE CONTACT FOR THIS LER

NAME Barb Dotson, Regulatory Analyst	TELEPHONE NUMBER (Include Area Code) (269) 764-2265
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> X	<input type="checkbox"/> NO		MONTH	DAY	YEAR

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On January 15, 2003, at 2015 hours, with the plant in Mode 1, it was determined from a review of surveillance procedure basis information, that all four steam generator (SG) reactor protection system (RPS) low-level trip setpoints in each SG were set such that the trip could occur below the allowable value specified in Technical Specification (TS) 3.3.1. The SG low-level trip setpoints were declared inoperable. It was determined that this condition had existed since 1998.

TS 3.3.1 requires four associated instrument channels, for the SG low-level RPS trip functions, to be operable in Modes 1 and 2, and in Modes 3, 4 and 5 when more than one full-length control rod is capable of being withdrawn and the primary coolant system boron concentration is less than refueling boron concentration. TS 3.3.1 does not provide a condition for four SG level instrument channels being inoperable. Therefore, TS 3.0.3 was entered. Nuclear Management Company, LLC, (NMC), requested enforcement discretion to extend the completion times in TS 3.0.3 by an additional 36 hours to avoid a plant shutdown. The Nuclear Regulatory Commission Staff verbally exercised discretion on January 16, 2003 at 0017 hours.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE	
PALISADES NUCLEAR PLANT	05000255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3	
		2003	- 001	- 00		

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

EVENT DESCRIPTION

On January 15, 2003, at 2015 hours, with the plant in Mode 1, it was determined from a review of surveillance procedure basis information, that all four steam generator [SG;AB] (SG) reactor protection system [JC] (RPS) low-level trip setpoints in each SG were set such that the trip could occur below the allowable value specified in Technical Specification (TS) 3.3.1. The SG low-level trip setpoints were declared inoperable. It was determined that this condition had existed since 1998.

TS 3.3.1 requires four associated instrument channels, for the SG low-level RPS trip functions, to be operable in Modes 1 and 2, and in Modes 3, 4 and 5 when more than one full-length control rod is capable of being withdrawn and the primary coolant system [AB] boron concentration is less than refueling boron concentration. TS 3.3.1 does not provide a condition for all four SG level instrument channels being inoperable. Therefore, TS 3.0.3 was entered. Nuclear Management Company, LLC, (NMC), requested enforcement discretion to extend the completion times in TS 3.0.3 by an additional 36 hours to avoid a plant shutdown. The Nuclear Regulatory Commission Staff verbally exercised discretion on January 16, 2003 at 0017 hours.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

CAUSE OF THE EVENT

A vendor calculation error resulted in the incorrect determination for the SG level transmitter static correction factor term. This resulted in biasing the calculated setpoints for the RPS channels on both steam generators in a manner that could cause the associated trips to actuate below the required TS requirement. This was compounded by knowledge deficiencies and technical review rigor deficiencies by the plant engineering staff.

CORRECTIVE ACTIONS

To compensate for this error, the setpoints were adjusted upward, and the SG low-level RPS trip functions were declared operable on January 16, 2003, at approximately 2000 hours.

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		2003	- 001	- 00	

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

The need for further training is being evaluated for appropriate system and design engineers in the procedures and calculation of the static pressure shift correction factor term for Rosemount differential pressure transmitters.

Rigorous application of engineering principles was reiterated.

The instrument setpoint methodology design guide is being revised to incorporate the lessons learned from this event.

The SG level transmitter calibration procedure is being revised and the transmitters will be restored to the correct values during the 2003 refueling outage.

SAFETY SIGNIFICANCE

The allowable value for the SG low-level setpoints contained in TS 3.3.1 is $\geq 25.9\%$. The allowable value was chosen to assure that Auxiliary Feedwater (AFW) flow would be initiated while the SG could still act as a heat sink and steam source, and to assure that a reactor trip would not occur on low level without the actuation of AFW.

NMC determined that the configuration of the low level trip setpoints resulted in a worst-case setpoint of approximately 24.71%. Although less than the TS allowable value, this setpoint is greater than the analytical value (18.14%) contained in the plant safety analysis, after including total loop uncertainties.

Therefore, since analytical limits were maintained, this event had no safety significance.

PREVIOUS SIMILAR EVENTS

None