NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Palo Verde Unit 1	0 5 0 0 0 5 2 8	1 OF 0 3

TITLE (4)
ECCS Throttle Valves Inoperability

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)
											0 5 0 0 0
0 8	1 9	8 5	8 5	–	0 4 8	– 0 0	0 9	1 8	8 5		0 5 0 0 0

OPERATING MODE (9)	3	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)	50.36(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 (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
W. F. Quinn, Manager of Nuclear Licensing (ext. 4087)	AREA CODE 6 0 2 — 9 4 3 - 7 2 0 0

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

At 1500 on August 19, 1985, the Unit 1 Shift Supervisor declared both Emergency Core Cooling System (ECCS) (BQ, BP) subsystems inoperable due to non-compliance with Surveillance Requirement 4.5.2.g.1. This specification requires that the position of the electrical stops of the ECCS throttle valves be verified to be correct within four hours following any valve stroking operation. This requirement had not been satisfied following various valve stroking evolutions since initial entry into MODE 4 (HOT SHUTDOWN) on April 21, 1985.

At the time this condition was discovered, Unit 1 was in MODE 3 (HOT STANDBY) at 0 percent power. The Shift Supervisor initiated LCO 3.0.3 at 1550 on August 19, 1985. Unit 1 entered MODE 4 at 2149 on August 19, 1985, and exited LCO 3.0.3 at that time.

A temporarily approved change to the appropriate procedure was initiated to permit the required testing of the ECCS throttle valves. Subsequent testing, with the unit in MODE 4, verified that all of the ECCS throttle valves assumed the correct position when opened electrically from the closed position.

Corrective actions will include a permanent revision to the appropriate surveillance procedure to include the necessary testing and an appropriate modification to procedures that address ECCS throttle valve stroking (e.g., shutdown cooling).

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

On August 19, 1985, at 1500, the on-duty Shift Technical Advisor (STA) determined that certain Emergency Core Cooling System (ECCS) throttle valves had not been tested as required by the Technical Specifications. At Palo Verde the ECCS consists of two independent subsystems, each of which is comprised of one high pressure safety injection pump (HPSI)(BQ) and one low pressure safety injection pump (LPSI)(BP).

At the time this condition was discovered, Unit 1 reactor was in MODE 3 (HOT STANDBY), 0 percent rated thermal power, with the reactor coolant at approximately 2260 psia and 505 degrees F. There were no structures, components, or systems that contributed to the condition. Limiting Condition for Operation (LCO) 3.5.2 requires two independent ECCS subsystems to be OPERABLE in MODE 3. Surveillance Requirement 4.5.2.g.1 requires that the correct position of each electrical position stop of certain ECCS throttle valves be verified within 4 hours following completion of each valve stroking operation.

Based upon a review of the Technical Specifications and the applicable surveillance procedure, the on-duty STA determined that Surveillance Requirement 4.5.2.g.1 had not been satisfied following various valve stroking evolutions that had occurred since initial entry into MODE 4 (HOT SHUTDOWN) which occurred on April 21, 1985. Therefore, at 1500 on August 19, 1985, the Shift Supervisor declared both ECCS subsystems inoperable and entered LCO 3.0.3. LCO 3.0.3 requires placing the unit in a MODE in which the affected LCO does not apply whenever circumstances have occurred that are not directly provided for in the associated ACTION statements and whose occurrence would violate the intent of the LCO.

At 1550 on August 19, 1985, action was initiated by the Shift Supervisor to place the unit in MODE 4 as required by LCO 3.0.3.

The NRC Operations Center was notified of the condition at 1714 on August 19, 1985, as required by 10 CFR 50.72. The NRC Resident Inspector was notified at 1741 on August 19, 1985.

LCO 3.5.3 requires, as a minimum, that one ECCS subsystem be OPERABLE with an OPERABLE high pressure safety injection pump (HPSI) while in MODE 4. At 2149 on August 19, 1985, the unit entered MODE 4 (less than 350 degrees F, cold leg temperature).

Upon entering MODE 4, the unit exited LCO 3.0.3 and entered the ACTION of LCO 3.5.3. The ACTION of LCO 3.5.3 requires that at least one ECCS subsystem (HPSI) be restored to an OPERABLE status within 1 hour or be in MODE 5 (COLD SHUTDOWN) within the next 20 hours. The ACTION clock for LCO 3.5.3 started at 1500 on August 19, 1985.

Subsequent to the discovery of the condition, a temporarily approved change to the appropriate surveillance test procedure added the steps necessary to verify the correct position of each electrical position stop for the affected ECCS throttle valves. Testing was initiated utilizing the corrected surveillance test procedure.

At 0632 on August 20, 1985, after evaluation of the test results, the Shift Supervisor declared the ECCS subsystem "A" (HPSI) OPERABLE, and thus exited the ACTION statement of LCO 3.5.3.

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

A temporary procedure was written and approved to perform a flow balance verification for two of the ECCS subsystem "B" LPSI throttle valves. One of these throttle valves had exhibited a small variation in its required electrical position stop and, therefore, an actual flow balance test was required to verify the correct position stop.

During the swing shift (1500-2300) of August 20, 1985, Unit 1 was further cooled and depressurized to allow the ECCS injection flow through the two companion throttle valves in question (LPSI "B").

At 0100 on August 21, 1985, the temporary test was concluded. The flow balance data met the criteria of the Technical Specifications for the two LPSI throttle valves.

With all ECCS subsystem throttle valve electrical position stops verified to be correct, repressurization of the reactor coolant system (RCS) was initiated.

The condition was a result of the Surveillance Requirement 4.5.2.g.1 not having been addressed in the appropriate surveillance procedure.

There were no safety consequences as a result of the condition. This conclusion is derived from the facts that all ECCS subsystem (A&B) throttle valve electrical position stops were subsequently verified to be in the correct position and no adjustments were necessary to ensure the correct position of the throttle valves.

Corrective actions that are planned as a result of the condition are as follows:

1. The appropriate surveillance procedure will be permanently revised to include the necessary steps to ensure compliance with Surveillance Requirement 4.5.2.g.1.

2. Procedures that address valve stroking evolutions (e.g., shutdown cooling), will be modified to include a reference and directive to implement the appropriate surveillance procedure to ensure compliance with Surveillance Requirement 4.5.2.g.1.

3. The feasibility of Surveillance Requirement 4.5.2.g.1 will be evaluated for possible change requests.

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

September 18, 1985
ANPP-33518-EEVB/GEC
Corrected Copy

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528, License No. NPF-41
Licensee Event Report - ECCS Throttle Valve Inoperability
File: 85-056-026; G.1.01.10

Dear Sirs:

Attached please find Licensee Event Report (LER) No. 85-048-00 prepared and submitted pursuant to 10 CFR 50.73. This LER addresses inoperable Emergency Core Cooling System throttle valves. In accordance with 10 CFR 50.73(d), we are herewith forwarding a copy of the LER to the Regional Administrator of the Region V Office.

If you have any questions or concerns, please contact me.

Very truly yours,

EE VanBrunt Jr/slh

E. E. Van Brunt, Jr.
Executive Vice President
Project Director

EEVB/GEC/slh
Attachment

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