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ACCESSION NBR:8902210430 DOC.DATE: 89/02/08 NOTARIZED: NO DOCKET #
 FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-001-00:on 890109,daily reactor coolant pump analysis
 missed.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 7
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Standardized plant.

05000528/

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NUDOCS-ABSTRACT	1 1	REG FILE 02	1 1
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RGN5 FILE 01	1 1		
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palo Verde Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 5 2 8					PAGE (3) 1 OF 0 6		
TITLE (4) Daily Reactor Coolant Pump Vibration Analysis Missed																	
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)				
01	09	89	89	001	00	02	08	89	N/A				0 5 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) 1,000		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)				<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 356A)			
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)				Facility Operating License Section 2.C			
		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 Timothy D. Shriver, Compliance Manager										TELEPHONE NUMBER							
										AREA CODE 602		393-2521					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																	
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS							
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR			
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO							

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

On January 9, 1989, Unit 1 was in Mode 1 (POWER OPERATION) when the daily Reactor Coolant Pump (RCP) vibration engineering analysis required by the Facility Operating License was not performed. This was discovered during performance of the analysis at approximately 1805 MST on January 10, 1989. The NRC was notified of the event by means of the Emergency Notification System on January 12, 1989.

The cause of the missed analysis was a cognitive personnel error by the individual assigned the task. As immediate corrective action, the January 9, 1989, RCP vibration data was analyzed at approximately 1850 MST on January 10, 1989 and no abnormalities noted. As action to prevent recurrence, the monitoring program for the RCP vibration will be incorporated into the Surveillance Test Program.

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PDR ADCK 05000528
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Palo Verde Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 5 2 8 8 9 — 0 0 1 — 0 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 9	0 0 1	0 0	0 2	OF	0 6

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

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

On January 9, 1989, Unit 1 was in Mode 1 (POWER OPERATION) at 100% power.

B. Reportable Event Description (Including Dates and Approximate Times of Major Occurrences):

Event Classification: Violation of the requirements contained in Section 2.C of the Facility Operating License.

At approximately 1805 MST on January 10, 1989, the Duty Shift Technical Advisor (utility, licensed) discovered that the daily Reactor Coolant Pump (RCP) vibration engineering analysis for the previous day, January 9, 1989, had not been performed pursuant to amendment 32 to section 2.C of Facility Operating License NPF-41.

On January 9, 1989, the Duty Shift Technical Advisor (utility, licensed) during the normal course of his duties, did not perform the engineering evaluation of the RCP vibration data.

At approximately 1805 MST on January 10, 1989, the Duty Shift Technical Advisor (utility, licensed) was performing the RCP engineering review when he noted that no data had been entered for January 9, 1989. Upon notifying the Shift Supervisor (utility, licensed), the Shift Technical Advisor performed the required review for the January 9, 1989, engineering analysis at approximately 1850 MST on January 10, 1989. The Duty Shift Technical Advisor reviewed administrative and department procedures in an attempt to determine reportability and was unable to find the specific case. He reported this to the Unit Lead Shift Technical Advisor and a decision was made to review reportability the next day (January 11, 1989).

On January 11, 1989, at approximately 1030, the Compliance Department was notified by the Shift Technical Advisor Section and a reportability determination requested. As a result of the discussion, the Compliance individual (utility, non-licensed) believed that recording of RCP Vibration Data had been missed vice understanding that a required engineering evaluation had not been performed. This was due to two previous instances had been reviewed by Compliance where data had not been properly logged. In these cases, a Compliance review had determined the missed readings were not reportable since the data could be retrieved by means of a separate recorder.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

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

On January 12, 1989, the Duty Shift Technical Advisor discussed the details of the event with a Compliance representative (utility, non-licensed). A review of the event by the Compliance Department revealed the incident was a violation of Section 2.C of the Facility Operating License. Thus, at approximately 0943 MST the violation was reported to the NRC Operations Center in accordance with Section 2.F of the Facility Operating License.

- C. Status of structures, systems, or components that were inoperable at the start of the event that contributed to the event:

Not applicable - No structures, systems, or components were inoperable at the start of the event which contributed to the event.

- D. Cause of each component or system failure, if known:

Not applicable - no component or system failure were involved.

- E. Failure mode, mechanism, and effect of each failed component, if known:

Not applicable - No component failures were involved.

- F. For failures of components with multiple functions, list of systems or secondary functions that were also affected:

Not applicable - No component failures were involved.

- G. For failure that rendered a train of a safety system inoperable, estimated time elapsed from the discovery of the failure until the train was returned to service:

Not applicable - No failures were involved.

- H. Method of discovery of each component or system failure or procedural error:

The Duty Shift Technical Advisor (utility, licensed) on January 10, 1989, during his performance of the RCP Vibration Analysis, discovered that the Daily RCP Vibration for January 9, 1989 had been missed.

- I. Cause of Event:

The cause of the event was a cognitive personnel error by the Shift Technical Advisor (utility, licensed) who did not perform the required evaluation. A review of the procedure for performance of the RCP vibration data engineering analysis by the Shift Technical Advisor Section determined the procedure was adequate to perform this function.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

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

No unusual characteristics of the work location contributed to this event.

The cause of the overdue notification to the NRC Operations Center was the procedure "PVNGS Reactor Coolant Pump Vibration Monitoring" (70AC-OSV08) and STA Section Instruction "RCP Vibration Program" (SI-14) referred to by these individuals did not specifically address reporting requirements for missed daily engineering analysis.

Contributory causes were identified as follows:

- 1) The Shift Technical Advisors and Shift Supervisors knowledgeable of the event were not aware that missing RCP vibration analysis was a violation of a license condition requiring a 24 hour call.
- 2) Communication breakdowns contributed to the cause of the delay in notification. Specifically, the information understood by Compliance led to an initial determination of non-reportability. This was due to two previous instances had been reviewed by Compliance where data had not been properly logged. In these cases, a Compliance review had determined the missed readings were not reportable since the data could be retrieved by means of a separate recorder. It was not until the details of event were provided by the Duty Shift Technical Advisor (utility, non-licensed) and thoroughly understood by Compliance that the true reporting requirements were identified.

J. Safety System Response:

Not applicable - No safety system response was expected or received.

K. Failed Component Information:

Not applicable - No failed components were involved.

II. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THIS EVENT:

By letter dated October 8, 1987, PVNGS informed the Commission that European reactor coolant pumps, similar to the Palo Verde pumps in design and manufacture, had exhibited shaft cracking. As a result, the licensee inspected the four pump shafts at Palo Verde Unit 1 during the first refueling outage, October 1987 to January 1988. The inspection revealed that cracks of varying depths and lengths were present on the shaft of all four pumps. No shaft failures have been experienced at Palo Verde. However the European data, as well as the information obtained from Palo Verde Unit 1, indicated an increase probability of a

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

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

reactor coolant pump shaft failure. Crack initiation in the existing shafts is predominantly caused by the chrome plating in highly stressed areas of the pump shaft; therefore, modifications to the shaft, including removal of the chrome plating, are warranted for extended shaft life. In addition, a pump shaft vibration monitoring program, which includes a spectral analysis of the vibration data, would provide early warning trends if a crack has started and is propagating.

The shaft modifications discussed have been complete for Unit 1. Additionally, the data for January 9, 1989, was retrieved and evaluated. No unusual trends or readings were found. Thus, this event does not have any consequences involving the health and safety of the public.

III. CORRECTIVE ACTIONS:

A. Immediate:

The RCP vibration engineering review for January 9, 1989, was completed at approximately 1850 MST on January 10, 1989. No abnormalities were noted.

The required notification to the NRC Operations Center was made on January 12, 1989 at approximately 0943 MST.

B. Action to Prevent Recurrence:

With regard to the missed daily Engineering analysis of the RCP vibration data on January 9, 1989, the following corrective action is being instituted:

1. As interim corrective action, the Shift Technical Advisor Section has been briefed on the necessity of timely performance of routine tasks which are tied to licensee conditions, such as the RCP vibration Data Engineering analysis. The Shift Technical Advisor Section will be briefed on the consequences of failing to perform the RCP vibration data engineering analysis.
2. The Monitoring Program for the RCP Shaft Vibration will be incorporated into the PVNGS Surveillance Test Program to provide additional controls necessary for timely completion of these requirements.
3. The responsible individual has been appropriately disciplined.

With regard to the delay in reporting the missed RCP vibration data engineering analysis, the following corrective action is being initiated:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

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

1. The administrative procedure (70AC-OSV08) and STA Section instruction (SI-14) are being revised to incorporate the reporting requirements for missing a daily RCP vibration data engineering analysis.
2. Briefing of Shift Technical Advisor and Compliance personnel will be conducted regarding the importance of always utilizing good communications practices.

Palo Verde Nuclear Generating Station utilizes one Compliance Department and one STA Section to provide coverage to all three units. Thus, the corrective action described should prevent recurrence at all three units. Additionally, the procedures to be revised are applicable to all three units.

IV. PREVIOUS SIMILAR EVENTS:

No previous events have been reported pursuant to 10CFR50.73 which involve this sequence of events.



Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00451-JGH/TDS/RJR

February 8, 1989

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528 (License No. NPF-41)
Licensee Event Report 89-001-00
File: 89-020-404

Attached please find Licensee Event Report (LER) No. 89-001-00 prepared and submitted pursuant to 10CFR 50.73. In accordance with 10CFR 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, please contact T. D. Shriver, Compliance Manager at (602) 393-2521.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/TDS/RJR/kj

Attachment

cc: D. B. Karner (all w/a)
E. E. Van Brunt, Jr.
J. B. Martin
T. J. Polich
M. J. Davis
A. C. Gehr
INPO Records Center

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