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NOTE TO ALL "RIDS" RECIPIENTS:

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Arizona Public Service Company PALO VERDE NUCLEAR GENERATING STATION P.O. BOX 52034 PHOENIX, ARIZONA 85072-2034

JAMES M, LEVINE VICE PRESIDENT NUCLEAR PRODUCTION 192-00847-JML/TRB/NLT June 21, 1993

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Mail Station P1-37 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 93-004-00 File: 93-020-404

Attached please find Licensee Event Report (LER) 93-004-00 prepared and submitted pursuant to 10CFR50.73. This LER reports that the inservice testing of the ASME Code Class 2 charging pumps had not been performed in accordance with the ASME Boiler and Pressure Vessel Code, Section XI, Paragraph IWP-4120, as required by Technical Specification Surveillance Requirement 4.0.5, 4.1.2.3, and 4.1.2.4. In accordance with 10CFR50.73(d), a copy of this LER is being forwarded to the Regional Administrator, NRC Region V.

If you have any questions, please contact T. R. Bradish, Manager, Nuclear Regulatory Affairs at (602) 393-5421.

Sincerely.

JML/TRB/rv Attachment

cc: W. F. Conway (all with attachment) B. H. Faulkenberry J. A. Sloan INPO Records Center 2800000

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	Palo Verde Unit 1																					
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	ASME Section XI Testing of Charging Pumps Not in Compliance with Code Requirements																					
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 20, 1993, at approximately 1340 MST, Units 1 and 3 were in Mode 1 (POWER OPERATION), operating at approximately 100 percent power, and Unit 2 was in Mode 6 (REFUELING) with the Reactor Coolant System at approximately 95 degrees Fahrenheit and at atmospheric pressure, when APS Engineering personnel determined that Technical Specification (TS) Surveillance Requirement (SR) 4.0.5, for performing the inservice testing of the ASME Code Class 2 charging pumps, had not been performed in accordance with the ASME Boiler and Pressure Vessel Code, Section XI. TS SR 4.1.2.3 and 4.1.2.4 are satisfied by ASME Section XI testing in accordance with SR 4.0.5.

ASME Section XI, Paragraph IWP-4120 requires the full-scale range of each surveillance test instrument to be less than or equal to three times the reference value. To be in compliance with Paragraph IWP-4120, the charging pump flow indicator full-scale range should be less than or equal to 132 gallons per minute (gpm) in Units 1 and 2, and less than or equal to 129 gpm in Unit 3. The full-scale range of the charging pump flow indicator used during all previous Section XI testing was 150 gpm.

Subsequent testing in accordance with Paragraph IWP-4120 indicated that the Unit 1 and Unit 3 charging pumps have been and continue to be capable of performing their intended safety function. Unit 2 testing will be performed during the current refueling outage. There have been no previous similar events reported pursuant to 10CFR50.73. .

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ICENSEE EVENT REPORT	(LER) TEXT CONTINUATION
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FACILITY NAME		DOCKET NUMBER		u	ER NUMBER				PAG	JE
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Palo Verde Unit	ī			·	4]		
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I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

At 1340 MST on May 20, 1993, Units 1 and 3 were in Mode 1 (POWER OPERATION), operating at approximately 100 percent power, and Unit 2 was in Mode 6 (REFUELING) with the Reactor Coolant System at approximately 95 degrees Fahrenheit and at atmospheric pressure.

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

Event Classification:

Condition prohibited by the plant's Technical Specifications (TS).

On May 20, 1993, at approximately 1340 MST, Units 1 and 3 entered TS ACTION Statements for Limiting Conditions for Operation (LCO) 3.0.3, 3.1.2.4, and 3.3.3.5, due to not testing Charging Pumps (CB)(P) A, B, and E, in accordance with the ASME Section XI Code requirement of Paragraph IWP-4120. TS Surveillance Requirement (SR) 4.0.3 was invoked to provide an additional 24 hours to complete the required surveillance testing prior to implementing the actions of TS LCO 3.0.3.

There are three charging pumps in each unit. The pumps are positive displacement pumps with a rated flow of approximately 44 gpm each. The pumps are part of the Chemical and Volume Control System (CB) and are used to provide charging flow from the Volume Control Tank (CB)(TK), Refueling Water Tank (BQ)(TK), or Spent Fuel Pool (ND), to the Reactor Coolant System (AB), and are required by Technical Specifications to provide boron injection.

Prior to the event, APS Engineering personnel (utility, nonlicensed) determined that the inservice testing of the ASME Code Class 2 charging pumps had not been performed in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Paragraph IWP-4120, as required by TS SR 4.0.5, 4.1.2.3, and 4.1.2.4. Paragraph IWP-4120 requires the full-scale range of each surveillance test instrument to be less than or equal to three times the reference value. Reference values are defined as one or more fixed sets of values as measured or observed when the equipment is known to be operating acceptably. The reference value for flow rate, determined during preoperational testing, is 44 gallons per minute (gpm) for the Unit 1 and Unit 2 charging pumps and 43 gpm for the Unit 3 charging pumps. Therefore, to be in compliance with Paragraph IWP-4120, the charging pump flow indicator (CB)(FI) full-scale range of each test instrument should •

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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XT		,		-
	be 132 gpm or less for	Units 1 and 2. and	d 129 gpm or less for	r Unit
	3. The full-scale rang	e of the charging	pump flow indicator	used
	in each unit during all	previous Section	XI testing was 150	gpm.
	-	-	-	
	The Unit 1 and the Unit	: 3 charging pump :	flow transmitters (C	B)(FT)
	were recalibrated for a	span of 100 gpm	and the charging pum	p flow '
	rate of each individual	pump was measure	d in Units 1 and 3 to	0
•	reestablish full qualif	ication of the pu	mps. The flow rate	
	associated with each ch	arging pump was m	easured by taking th	e
_	average voltage reading	s at the output of	r the instrument loop	ps
·	current-to-voltage conv	cuivalant nump f	low matos using a	ements
Se	conversion relationship	equivalent pump I.	now laces using a	ument
	All numps were determin	ed to be operation	within the accental	hle
	limits. Following the	test, the transmi	tters were returned	to
	their original 150 gpm	span.		
	0 0.	•		
4	On May 20, 1993, at app	roximately 1340 M	ST, the Unit 2 charg	ing
	pumps were declared ino	perable and will	be tested in a manne	r
•	similar to the Units 1	and 3 pumps befor	e being returned to	
-	operable status. Testi	ng will be perform	med prior to returni	ng to
	Mode 4 after the curren	it refueling outag	е.	
•	On May 20 1993 at ann	vovimetoly 2155 M	ST the work associa	red .
· • •	with the flow transmitt	er calibrations a	nd the charging pump	-
	testing was completed i	n both Unit 1 and	Unit 3, and all thr	ee
	charging pumps in each	unit were declare	d operable. TS SR 4	.0.3
÷	was revoked and the act	ions associated w	ith charging pump	
-	inoperability for TS LC	3.0.3, 3.1.2.4,	and 3.3.3.5 were ex	ited.
с.	Status of structures, s	ystems, or compon	ents that were inope	rable
	at the start of the eve	ent that contribut	ed to the event:	÷ «
	Not applicable - no str	ucture evetome	or components were	
	inonerable at the start	of the event whi	ch contributed to th	is
	event.	. 02 0110 010110		
D.	Cause of each component	: or system failur	e, if known:	
16	New employed a me been		failuman maya imwalm	ad
	Not applicable - no com	ponent or system	rallures were involv	ea.
E.	Failure mode mechanism	, and effect of e	ach failed component	. if
2.	known:	.,		,
0	Not applicable - no com	ponent failures w	ere involved.	
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT		· · · · ·		
F.	For failures of comp systems or secondary	ponents with multiple y functions that were	functions, list of also affected:	
	Not applicable - no were involved.	failures of component	ts with multiple functions	5
G.	For a failure that a estimated time elaps train was returned t	rendered a train of a sed from the discover to service:	safety system inoperable y of the failure until the	,
	Not applicable - no system inoperable we	failures that render ere involved.	ed a train of a safety	_ •
н.	Method of discovery procedural error:	of each component or	system failure or	
	Not applicable - the or procedural errors	ere have been no composidentified.	onent or system failures	
I.	Cause of Event:	-		
	The ASME Section XI developed by APS per November 1988. It w this program that th constitute a deviat code would be requir cognitive personnel	Pump and Valve Inser- rsonnel and was appro- was not identified du he use of the install ion from the code and red. Therefore, the error (SALP Cause Co	vice Testing Program was ved by the NRC in ring the development of ed flow indicator would that NRC relief from the cause of this event is de A: Personnel Error).	
J.	Safety System Respon	nse:		۲
	Not applicable - the were necessary.	ere were no safety sys	stem responses and none	
К.	Failed Component In	formation:		
	Not applicable - no	component failures w	ere involved.	ય
II. AS	SESSMENT OF THE SAFETY (CONSEQUENCES AND IMPL	ICATIONS OF THIS EVENT:	
A : pu A : 19 an pe: pe:	review of previous surve mps met the flow require review of the test data 03, which is described 1 Unit 3 charging pumps forming their intended formed during the curre	eillance test data in ements specified in T taken during the tes in Section I.B, indic have been and contin- safety function. Un ent refueling outage.	dicates that the charging S 4.1.2.2. ting performed on May 20, ates that the Unit 1 ue to be capable of it 2 testing will be The event did not resul	t

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LICENSEE EVENT REPORT (L	ER) TEXT CONTINUATION
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FACILITY NAME	· DOCKET NUMBER	LER NUMBER	PAGE
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Palo Verde Unit			
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in any challenges to the fission product barriers or result in any releases of radioactive materials. There were no adverse safety consequences or implications as a result of this event. This event did not adversely affect the safe operation of the plant or the health and safety of the public.

. III. CORRECTIVE ACTION:

TEXT

A. Immediate:

Testing was performed in accordance with the method described in Section I.B and it was determined that the pumps were operating in accordance with the ASME Section XI Code requirements.

B. Action to Prevent Recurrence:

An investigation of this event is being conducted in accordance with the PVNGS Incident Investigation Program. APS Engineering personnel are performing a review of the instrumentation used to perform the ASME Section XI testing to verify the instrumentation used is within the specified ASME Section XI requirements. In the event other instances are identified where the testing is not in compliance with the ASME Section XI Code requirements, APS will submit a supplement to this LER.

Actions to prevent recurrence will be developed based upon the results of the investigation. As an interim corrective action, the surveillance testing procedures will be revised so that testing is performed as described in Section II. Resolution of the final corrective action will be tracked to completion under the PVNGS Commitment Action Tracking System.

IV. PREVIOUS SIMILAR EVENTS:

There have been no previous similar events reported pursuant to 10CFR50.73.

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