ACCELERATED STRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:921	0090295 DOC.DATE: 92	2/10/05 NOTARIZED: NO	DOCKET #
FACIL:STN-50-530	Palo Verde Nuclear Sta	ation, Unit 3, Arizona Publi	05000530
auth . Name	AUTHOR AFFILIATION		
BRADISH, T.R.	Arizona Public Service	e Co. (formerly Arizona Nucle	ar Power
LEVINE, J.M.	Arizona Public Service	e Co. (formerly Arizona Nucle	ar Power
RECIP.NAME	RECIPIENT AFFILIATION	N	

SUBJECT: LER 92-003-00:on 920930, determined that Train B LPSIP breaker may have been inoperable since 920815. Caused by procedural deficiency. Subj breaker replaced applicable operations procedures revised. W/921005 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR / ENCL / SIZE: // TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Standardized plant.

.1

	RECIPIENT ID CODE/NAME	COPI LTTR	es Encl	RECIPIENT ID CODE/NAME	COP	IES ENCL	[
	PD5 LA	l	1	PD5 PD	1	1	
	TRAMMELL,C	1	l			-	۵
INTERNAL:	ACNW	2	2	ACRS	2	2	\$
	AEOD/DOA	1	1	AEOD/DSP/TPAB	1	1	J
	AEOD/ROAB/DSP	2	2	NRR/DET/EMEB 7E	· 1	1	
	NRR/DLPO/LHFB10	1 '	1	NRR/DLPO/LPEB10	· 1	1	
	NRR/DOEA/OEAB	1	ī	NRR/DREP/PRPB11	2	2	
	NRR/DST/SELB 8D	ī	ī	NRR/DST/SICB8H3	ĩ	ī	
	NRR/DST/SPLB8D1	ī	ī	NRR/DST/SRXB 8E	ī	1	
	REG FILE 02	ī	ī	RES/DSIR/EIB	ī	ī	
	RGN5 FILE 01	ī	ī		-	-	
EXTERNAL:	EG&G BRYCE, J.H	2	2	L ST LOBBY WARD	l	I	R
	NRC PDR	1	1	NSIC MURPHY, G.A	1	1	
	NSIC POORE,W.	1	1	NUDOCS FULL TXT	1	1	т

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK. ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED! D

S

А

D

D

S

R

T

D

S

05000530/

•

•

.

x

•

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

192-00802-JML/TRB/KR

October 5, 1992

JAMES M. LEVINE VICE PRESIDENT NUCLEAR PRODUCTION

> U. S. Nuclear Regulatory Commission Attention: Document Control Desk Mail Station P1-37 Washington, D.C. 20555

Dear Sirs:

Subject: Palo V Unit 3

Palo Verde Nuclear Generating Station (PVNGS) Unit 3 Docket No. STN 50-530 (License No. NPF-74) Licensee Event Report 92-003-00 <u>File: 92-020-404</u>

Attached please find Licensee Event Report (LER) 92-003-00 prepared and submitted pursuant to 10CFR50.73. This LER reports that the OPERABILITY requirements for Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.3.5 ACTION b (Remote Shutdown System Instrumentation), TS LCO 3.5.2 ACTION a (Emergency Core Cooling Systems Subsystems - Reactor Coolant System Cold Leg Temperature Greater Than or Equal To 350 Degrees Fahrenheit), and TS LCO 3.7.11 ACTION a (Shutdown Cooling System) may not have been met. On August 31, 1992, the Train B Low Pressure Safety Injection (LPSI) pump failed to start from the Control Room during the performance of the Post Accident Sampling System functional testing. The Train B LPSI pump may have been inoperable since August 15, 1992. The Train B LPSI pump was last started for the performance of the LPSI operability surveillance testing on August 15, 1992. In addition, whenever Train A ECCS TS LCOs were entered between August 15, 1992 and August 31, 1992, TS LCO 3.0.3 requirements may not have been met when the Train B LPSI pump may have been inoperable. 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, Compliance Manager, at (602) 393-5421.

Very truly yours, James M. Jeine

W.J.

JML/TRB/KR

Attachment

PDR

210090295

ADOCK

68004a

05000530 PDR

, • a -• • Ŧ

Licensee Event Report .3-92-003-00

NRC Document Control Desk Page 2

.

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

* 2 ,

	•																					_	_			_	_			_
م ع		ĸ							τĝ	L	CEN	SEE E	EVEN	T RE	PO	RT	(LE	R)									٠			
EACH IT																				DO	ск	T NU	MB	ER (2)		-	P	AGE	(3)
FACILIT		้งจ	nda	5 H	Init	+ 3	2														1 6	: 1 0	1.	014	, , 1 5	131		1		
	Faio	ve	rue	8 0		<u> </u>	, 													10	<u></u>				15	17	V			10
111LE (4) T			`	n			- c			τ		. n.	D.			. т				_					-				
	Irai	nв		WC	rre	255	ure	<u>e </u>	ате	<u>cy</u>	Inje		<u>n Pu</u>	<u>пр в</u> і	rea	акег	<u> </u>	no	pera	AD I C		tico	h.h.		-0.01					
EVE	NT DATE	(5)	_		• 1	LER I	DUEN	BER (5) XVIREV		RE	PORTDA	(IE (7)	_			EAG	211 17		ER FA	-iu	ne3	MAA		OCKET		RFR	(5)		
MONTH	DAY	YEA	R	YEAF	<u>1</u>	N	UMB	ER	IN NU	MBER	MONTH	DAY	YEA	н			10	۸۱ ۸۱	7 1 100m / K					ľ	. 1 .	1.0				
		1																IN/	A					4	5	0	0	<u> </u>		
		۱ <u>.</u> .		~ .	~I_			ا م ا		10	110							M	/٨						•				•	
09	03	9	Z	9	2	10	<u>10</u>	3	0	0		101:	9 9	2				14	- A					1	0 5	0	0	0		
OP	ERATING		_ L	THIS	REPO)RT I	3 SUI	вмпт	ED PU	RSUAL	IT OT TH	RE REQU	TREMEN	TS OF 10		R §: (C	heck	one	or more	of the	folk	wing) (11	<u>)</u>					4	
M	ODF (a)		1		20.4	.02(Ъ))				20.40	5(c)		L		50.7:	3(#)(2)	(₩)							_	73.71(b)			
POW	ER				20.4	05(a))(1)()				50.36	(0)(1)		L		50.73	3(#)(2)	(v)						L	4	73.71(c)			
(10)	<u>5.</u> 0	191	2Г		20.4	-05(a)) (1) (ii)				50.36	(c)(2)				50.73	3(#)(2)	(vii)						L		OTHE	R (Sp	ecily in	Abs NRC	tract Form
2000.000					20.4	05(a))(1)(II))		X	50.73	(a)(2)(i)		Γ		50.73	3(a)(2)	(vii)	(A)	•				1		366A)				
			8t		20.4	05(a))(1)(hv)			50.73	(a)(2)(ii)		Г		50.73	3(=)(2)	(vi))	(B)					1						
			8t		20.4	05(*))(1)(v)				50.73	(a)(2)(iii)			7	50.73	3(*)(2)	(x)												
		- -	8.281								uc	ENSEE C	ONTAC	T FOR T	113 L	ER (12	2)													
NAME																	·				T			TE	LEPH	ONEN	UMB	ER		-
												-						•			A	REA	COD	E						
	Thom	a. 1	D	Rn	adi	ich	. 1	^	<u>_</u> 1.		- M		•								1	:		2	210	121	. 1	61.	11	211
	mon	as 1	\ •	-01	au	-511	<u> </u>	5011	hiid	2110	e riai	layer			_						10	10	1	4	5 3	13		<u> </u>	<u>† [(</u>	411
				,			C(OMPL	ETE OI		EFORE	ACH CO	MPONE	NT FAILU	HEC	JE9CH	BED	IN 1	HIS HE	PORT	(13)								
CAUSE	SYSTEM	coł	NPO	NENT	•	MAI TI	NUFA	с. ì	REPO	RTABL	E			CAUSE	SY	STEM	cc	мро	NENT		MA T	NUFA UREF	10. 1		EPORI TO NP	RDS				
	•			ŧ				_											•											
	1	1	1	1		1	1	1								1 .	1	1	1		L	ſ	T							
								- <u> </u>							+	- I						_1	_							
			T			r		r								1	1		1		Ē	I	ī							
							<u>ene</u>		ENTAT	RED	DOT EYD	ECTED (14)	I	-l				I	-				_!_		MON	тн	DAY	Ţ	YEAR
													•••							-1		EXP	ECT	ED		-			- -	
																					1	DAT	E (1	15)	,	Ι.				
YES	(If yes, co	mplete	EXF	ECT	EDSU	IBMIS	SSION	DAT	E)			1X M	10 ,																	
	OT // 1/								- alast			Non line al	1101	-																_

On September 3, 1992, at approximately 2100 MST, Palo Verde Unit 3 was in Mode 1 (POWER OPERATION), operating at approximately 92 percent power when APS Plant Engineering personnel determined that the Train B Low Pressure Safety Injection (LPSI) pump breaker may have been inoperable since August 15, 1992. The Train B LPSI pump was last started for the performance of the LPSI operability surveillance testing on August 15, 1992. On August 31, 1992, the Train B LPSI pump failed to start from the Control Room during the performance of the Post Accident Sampling System (PASS) functional testing. Since the Train B LPSI pump may have been inoperable since August 15, 1992, the ACTION requirements for Technical Specification (TS) Limiting Conditions for Operation (LCO) 3.3.3.5 ACTION b, 3.5.2 ACTION a, and 3.7.11 ACTION a may not have been met. In addition, whenever Train A ECCS TS LCOs were entered between August 15, 1992 and August 31, 1992, TS LCO 3.0.3 requirements may not have been met when the Train B LPSI pump may have been inoperable.

The cause of the event was determined to be procedural deficiency in that the procedure did not provide adequate guidance to verify that the breaker was installed correctly. As corrective action, the Train B LPSI pump breaker and the Control Room handswitch were quarantined pending troubleshooting. The Train B LPSI pump breaker was replaced. The replacement breaker was verified to be installed correctly.

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



•	•	и -			
ACILITY NAME		•	DOCKET NUMBER	LER NUMBER	PAGE
Palo V	'erde Uni	t 3			
		÷	0151010101513	0 9 2 0 0 0 3 0 0	0 2 0 0 0 8
EXT			<u> </u>		
I.	DESCI	RIPTION OF WHAT OCCU	RRED:		-
	Α.	Initial Conditions	:		-
		At 2100 MST on Sep (POWER OPERATION),	tember 3, 1992, Palo operating at approxi	Verde Unit 3 was in Mo Imately 92 percent powe	ode 1 er.
	Β.	Reportable Event D Times of Major Occ	escription (Including urrences):	g Dates and Approximate	3
		Event Classification	on: Conditior Technical	n prohibited by the pla Specifications.	int's
	Ţ	At approximately 2 Engineering person Train B Low Pressu (BRK) (P) (BP) (PBB- 1992. The Train B of the LPSI operab On August 31, 1992 Control Room (NA) Sampling System (P. LPSI pump may have ACTION requirement Conditions for Ope System Instrumenta Cooling Systems (E (RCS) Cold Leg Tem Fahrenheit], and T (BP) may not have LCOS were entered 1 LCO 3.0.3 requirem pump may have been	nel (utility, non-lic re Safety Injection (S04F) may have been i LPSI pump was last s ility surveillance te , the Train B LPSI pu during the performanc ASS)(IP) functional t been inoperable since s for Technical Speci ration (LCO) 3.3.3.5 tion), TS LCO 3.5.2 A CCS) (BP/BQ) Subsyste perature Greater Thar S LCO 3.7.11 ACTION a been met. In addition between August 15, 19 ents may not have bee inoperable.	censed) determined that (LPSI) pump breaker inoperable since August started for the perform esting on August 15, 19 amp failed to start from the of the Post Accident testing. Since the Tra- te August 15, 1992, the fication (TS) Limiting ACTION b (Remote Shute ACTION b (Remote Shute and For Equal To 350 Degree a (Shutdown Cooling Sys- bon, whenever Train A E0 992 and August 31, 1992	: the : 15, nance)92. om the : ain B i down re System ees stem) CCS TS 2, TS B LPSI
		Prior to the event breaker was schedu personnel (utility 1032 MST, the Shif 3.3.3.5 ACTION b, a. Following the approved maintenand Circuit Breakers T started and satisf MST, TS LCO 3.3.3. 3.7.11 ACTION a wes	, on August 11, 1992, led for routine repla & contractor, non-li t Supervisor (utility TS LCO 3.5.2 ACTION a breaker replacement i ce procedure (Mainter ype AM-4.16-250), the actorily function tes 5 ACTION b, TS LCO 3. re exited.	the Train B LPSI pump acement by maintenance (censed). At approxima y, licensed) entered TS a, and TS LCO 3.7.11 AC in accordance with an hance of Medium Voltago e Train B LPSI pump was sted. At approximately 5.2 ACTION a, and TS 1) ately 3 LCO CTION 2 3 4 7 1510 LCO
		At approximately 0 pump was started for	343 MST on August 15, or the performance of	1992, the Train B LPS the surveillance	31

•

.

				DACE
LITY NAME	, pa	DOCKET NUMBER		
Palo Verde Unit 3			NUMBER IN NUMBER	<u>H</u>
	-	0.5.0.0.5.2.		0 0 1 2 0 5
		0500053	0 3 2 0 0 3 0 0	<u> 10 3 0 (</u>
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION ANALY INTERS INTERNET ANALY INTERNET INTERNET ST Analytic and pressure Vessel Code). The surveillance requirements were sacisfied and the Train B LFSI pump was stopped at approximately 0355 MST. At approximately 1459 MST on August 31, 1992, the Train B ECGS was declared inoperable to support the PASS functional testing (1.e., the LF91 valves are realigned to minified and her PASS sample point) and the Shift Supervisor entered TS LCO 3.5.2 ACTION a. At approximately 1306 MST, in accordance with the PASS sample point) and the Shift Supervisor entered TS LCO 3.5.2 ACTION a. At approximately 1506 MST, in accordance with the PASS functional surveillance testing procedure, Control Room prosonnel attempted to start the Train B LFSI pump from the Control Room, Nume the handswitch was caken to the breaker cubicle located at the 100 foct elevation of the Train B Switchgear Room in the Control Building (NA). The Shift Supervisor quarantined the Train B LFSI pump braker and the Control Room handswits (ERCFA). In addition, the Shift Supervisor quarantined the Train B LFSI pump braker and the Control Room handswits (ERCFA). In addition, the Shift Supervisor entered TS LCO 3.3.3.5 ACTION b and TS LCO 3.7.11 ACTION a. During the ERCFA, AFS Plant Engineering personnel observed that the train B LFSI pump breaker's positive interlock roller is contered in through a mechanical linkage (1.e., interlock shift) to the positive interlock suite prevented the positive interlock switch arm from fully depressing the plunger on the positive interlock switch. The partially depressed plunger on the positive interlock switch arm fu				
req	uirement to ensur	e the LPSI pump is c	perable pursuant to	TS
4.0	.5 (Section XI of	the ASME Boiler and	Pressure Vessel Coo	le).
The	surveillance req	uirements were satis	fied and the Train I	3 LPSI
pum	p was stopped at	approximately 0355 M	IST.	
At .	annroximately 145	9 MST on August 31	1992, the Train B E(CCS was
dec	lared inoperable	to support the PASS	functional testing ((i.e.,
the	LPSI valves are	realigned to miniflo	w and LPSI pumps are	Э
sta	rted to get safet;	y injection flow to	the PASS sample point	nt) and
the	Shift Supervisor	entered TS LCO 3.5.	2 ACTION a. At	_
app	roximately 1506 M	ST, in accordance wi	th the PASS function	nal
sur	veillance testing	IPST numb from the	Room personnel atten	apted
han han	dswitch was taken	to the start positi	on the Train B LPS	רחפינוס משנות - T
fai	led to start, no	alarms were received	i, and no abnormal	r pomp
ind	ications existed	at the breaker cubic	le located at the 10)0 foot
ele	vation of the Tra	in B Switchgear Room	in the Control Buil	lding
(NA)). The Shift Sup	ervisor quarantined	the Train B LPSI pur	np
Drea	aker and the Cont	rol Koom nandswitten	pending troubleshoot	ling
and add	ition. the Shift	Supervisor entered T	S LCO 3.3.3.5 ACTION	V b and
TSI	LCO 3.7.11 ACTION	a.		
_				
Duri	ing the ERCFA, AP	S Plant Engineering	personnel observed t	chat
the	Train B LPS1 pum	p breaker's positive	e interlock roller wa	15
into	erlock cam plate.	The positive inter	lock roller is conne	acted
thre	ough a mechanical	linkage (i.e., inte	rlock shaft) to the	
post	itive interlock s	witch arm. The elev	ated position of the	3
posi	itive interlock re	oller prevented the	positive interlock s	switch
. arm	from fully depres	ssing the plunger on	the positive interl	Lock
SWIG	upper "V" notch	n the positive inter on the interlock cam	DOCK FOLLEE 15 CENCE	red in
inte	erlock switch arm	fully depresses the	place, che posicive plunger on the posi	tive
inte	erlock switch.]	The partially depres	sed plunger on the	
post	itive interlock s	witch did not allow	full contact with th	1e
swit	tch used for the l	breaker closing circ	uitry. This resulte	ed in a
high	n resistance conne	ection in the positi	ve interlock switch.	, 1
Duri	ing the ERUFA, the	e contact of the pos	d therefore provents	CN WAS
brez	aker from closing	when Control Room n	ersonnel attempted t	.u une
stai	ct the Train B LP	SI pump from the Con	trol Room.	
The	'Train B LPSI pum	p was last started (1.e., successful bre	aker
The clos	'Train B LPSI pump sure) for the peri	p was last started (formance of the LPSI 1992 On Sentembe	operability surveil	aker lance
The clos test Engi	'Train B LPSI pump sure) for the peri ting on August 15 neering personnel	p was last started (formance of the LPSI , 1992. On Septembe l determined that th	1.e., successful bre operability surveil r 3, 1992, APS Plant e August 15. 1992 cl	eaker lance : .osure

٠,

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME		DOCKET NUMBER	LER NUMBER	PAGE
Palo Verde Unit 3				
	•	0151010101513	0 9 2 - 0 0 3 - 0 0	0 4 0F 0 8
TEXT ,				
the	positive interlo	ock switch to margin	nally open, preventing	

further electrical closure of the Train B LPSI pump breaker. Therefore, the Train B LPSI pump may have been inoperable between August 15, 1992 and August 31, 1992 and the ACTION requirements for Technical Specification (TS) Limiting Conditions for Operation (LCO) 3.3.3.5 ACTION b, TS LCO 3.5.2 ACTION a, and TS LCO 3.7.11 ACTION a may not have been met.

The Train B LPSI pump breaker was replaced on September 1, 1992. The replacement breaker's positive interlock roller was verified to be centered in the upper "V" notch, the positive interlock switch arm was verified to be fully depressing the plunger on the positive interlock switch, and the replacement breaker was successfully closed twice. At approximately 0325 MST on September 2, 1992, the Train B LPSI was declared operable and the Shift Supervisor exited TS LCO 3.3.3.5 ACTION b, TS LCO 3.5.2 ACTION a, and TS LCO 3.7.11 ACTION a.

At approximately 2202 MST on August 25, 1992, and at approximately 0410 on August 27, 1992, several TS LCOs, including TS LCO 3.5.2 ACTION a (ECCS or specifically, Train A LPSI), were momentarily entered and exited when the control power disconnect on the Train A Essential Chilled Water System (KM) (i.e., support system that provides Engineered Safety Features room cooling during Design Basis Accident conditions) was momentarily opened and then closed after starting the Essential Chilled Water circulation pump. In addition, between 1258 MST and 1454 MST on August 31, 1992 (approximately 2 hours), the Train A ECCS was declared inoperable to support the PASS functional testing and the Shift Supervisor entered and exited TS LCO 3.5.2 ACTION a. As a result, whenever Train A ECCS TS LCOs were entered between August 15, 1992 and August 31, 1992, the TS LCO 3.0.3 requirements may not have been met when the Train B LPSI pump may have been inoperable.

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

Other than the Train B LPSI breaker that may have been inoperable as discussed in Section I.B, no structures, systems, or components were inoperable at the start of the event which contributed to this event.

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

Not applicable - no component or system failures were involved.

s

,

, s •	*			
ILITY NAME	•	DOCKET NUMBER	LER NUMBER	PAGE
		•	YEAR SEQUENTIAL REVISION	N
Palo Verde L	Init 3,			
•	pi	0151010101513	0 9 2 0 0 3 0 0	0 5 OF 0
-		······································	3	1
E.	Failure mode, mec known:	hanism, and effect of	each failed component	, if '
	Not applicable -	no component failures	were involved.	
F.	For failures of c systems or second	omponents with multip ary functions that we	le functions, list of re also affected:	
,	Not applicable - were involved.	no failures of compon	ents with multiple fun	ctions
G.	For a failure tha estimated time el train was returne	t rendered a train of apsed from the discov d to service:	a safety system inope ery of the failure unt	rable, il the
	Not applicable - system inoperable	no failures that rend were involved.	ered a train of a safe	ty
н.	Method of discove procedural error:	ry of each component	or system failure or	
	The procedural de during the invest	ficiency discussed in igation.	Section I.I was disco	vered
I.	Cause of Event:		I	
• - •	An investigation Investigation Pro existing procedur the Train B LPSI approved maintenar Medium Voltage Ci investigation det install the break Medium Voltage Ci adequate guidance correctly when in complete rewrite breaker into the Voltage Circuit B Revision 1 of the step in the appen The procedure ste	was initiated in acco gram. As part of the al controls was perfo pump breaker was repl nce procedure (Revisi rcuit Breakers Type A ermined that the main er into the cubicle (rcuit Breakers Type A to verify that the b the racked up positi of the maintenance pr cubicle (Revision 1 o reakers Type AM-4.16- maintenance procedur dices addressing the p states that the pos	rdance with the APS In investigation, a revi rmed. On August 11, 1 aced in accordance wit on 0 of Maintenance of M-4.16-250). The tenance procedure used Revision 0 of Maintena M-4.16-250) did not pr reaker was installed on. On August 19, 199 ocedure used to instal f the Maintenance of M 250) became effective. e included an addition installation of the br itive interlock roller	cident ew of 992, h an to nce of ovide 2, a 1 the edium al eaker.
	procedure states approximately 1/1 plate underneath breaker had been	that the interlock ro 6-inch clearance to t it. The investigatio installed in accordan	ller should have he stationary interfer n determined that if t ce with Revision 1 of	ence he the

٠ • • -

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

•

			•
FACILITY NAME		DOCKET NUMBER	LER NUMBER PAGE
Palo Verde Unit	3		YEAR SCOLENTIAL NUMBER
		015101010151310	912-01013-0100160=018
TEXT .			
	maintenance procedure, procedural weakness was Cause Code D: Defectiv	the event would no determined to have e Procedures).	t have occurred. A e caused the event (SALP
۰	No unusual characterist heat, poor lighting) di were no personnel error	ics of the work lo rectly contributed s which contribute	cation (e.g., noise, to this event. There d to this event.
J.	Safety System Response:		# '
	Not applicable - there were necessary.	were no safety sys	tem responses and none
к.	Failed Component Inform	ation:	
	There were no component Blast Air Circuit Break The model number is Typ	failures related a er was manufacture e AM-4.16-250-9H.	to this event. The Magna d by General Electric.
II. ASSESS	Sment of the safety cons	EQUENCES AND IMPLI	CATIONS OF THIS EVENT:
The OI RCS te that s the ev subsys actuat pressu The LI contai receip	PERABILITY of two separa emperatures greater than sufficient emergency cor- vent of a Loss of Coolan stem through any single tion signal (SIAS) is in urizer pressure or 2-out PSI pump will automatica inment spray actuation s of of 2-out-of-4 high-hi	te and independent or equal to 350 de e cooling capabilis t Accident (LOCA) a failure considerat: itiated by receipt -of-4 high containe lly start upon rece ignal (CSAS). A CS gh containment pres	ECCS subsystems with the egrees Fahrenheit ensures ty will be available in assuming the loss of one ion. A safety injection of 2-out-of-4 low ment pressure signals. eipt of a SIAS or SAS is initiated by ssure signal.
The in inopen may no August declar event would not st persor requir pump b affect manual inject	nvestigation determined cable between August 15, of have automatically states 31, 1992, for approxim- red inoperable to suppor of a SIAS/CSAS, a safet have alerted Control Ro- cart. The Emergency Oper- anel to manually actuate red position. This would breaker (manual closure red by the open contact ly realigning Train A La borated water into the per square inch absolut	that the Train B Li 1992 and August 31 arted on a SIAS/CSA ately 2 hours, the t the PASS function y equipment actuate of personnel that to rating Procedures of the components (i. d entail manually of the Train B LPSI on the positive int PSI valve position. RCS unless RCS pre-	PSI pump may have been 1, 1992, and therefore, AS. In addition, on Train A ECCS was hal testing. In the ed status (SEAS) alarm the Train B LPSI pump did direct Control Room .e., LPSI pumps) to the closing the Train B LPSI I pump breaker was not terlock switch) or . LPSI pumps would not essure dropped to 250 event of a large break

2 1 , I. ` . .

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME		DOCKET NUMBER	LER NUMBER	PAGE
Palo Verde Unit 3		۶		
	.*	0 5 0 0 0 5 3 0	912-01013-010	0 7 0F 0 8

LOCA and both LPSI pumps unavailable, the Functional Recovery procedures direct Control Room personnel to realign one train of the Containment Spray System to inject borated water into the RCS.

During safety injection, the LPSI pumps inject large volumes of borated water into the RCS for an emergency involving a large pipe rupture. For safety analysis, it is assumed that only one of the LPSI pumps is available following an accident and that 50 percent of the flow is lost through spillage. A probabilistic risk assessment (PRA) evaluating the impact on core damage when both LPSI pumps are inoperable for a period of 2 hours was performed. The PRA results indicate that the core damage probability was increased by approximately 5.0E-8 over a baseline value of 2.0E-8 for the 2 hour period. As a point of reference, the increase in the probability of core damage associated with the Train A Auxiliary Feedwater pump being inoperable for 72 hours as allowed by TS is approximately 1.0E-5. Therefore, from a risk perspective, the potential risks imposed on health and safety of the public is judged to be minimal. The event did not result in any challenges to the fission product barriers or result in any releases of radioactive materials.

III. CORRECTIVE ACTION:

A. Immediate:

The Shift Supervisor quarantimed the Train B LPSI pump breaker and the Control Room handswitch pending troubleshooting and an equipment root cause of failure analysis (ERCFA). Following troubleshooting and ERCFA, the Train B LPSI pump breaker was replaced. The replacement breaker was verified to be installed correctly.

Applicable Operations procedures have been revised to ensure that Control Room personnel verify that the positive interlock roller, positive interlock switch arm, and the positive interlock switch are in their correct positions.

B. . Action to Prevent Recurrence:

The Non-Class and Class 1E 4.16 kV (EA and EB) and Non-Class 1E 13.8kV (EA) Magne Blast breakers are currently being inspected in all three units under an approved inspection plan and work authorization documents. Because some breakers are required to remain closed due to plant conditions, the breaker inspection will be completed in Unit 1 and Unit 2 during their next refueling outage and in Unit 3 prior to completion of the current refueling

° 1 ۴ \$

		LICENSEE EVENT R	EPORT (LER) TEXT	CONTINUATION	
ITY NAME	<u></u>	<u> </u>	DOCKET NUMBER		
Palo Ver	rde Unit 3	v		YEAR W NUMBER W NUMBER	
	<u>,</u>		0 5 0 0 0 5	1310 912 01013 0101	0 8 0 F
	outag under	ge. The breaker r the PVNGS Commi	inspection will tment Action Tra	be tracked to completion acking System.	۹
IV.	PREVIOUS S	IMILAR EVENTS:			
	No other pi	revious events ha	ve been reported	i pursuant to 10CFR50.73.	-
					-
			A	`	
		`			
n					
		۸.			
		•			
					•
					-
			â		
•	-	,			
				-	
	1	ň			
	×				-
•					

×.

91

,

¢°

· · . ·

ι.

.

.

· · ·