

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9008010101 DOC.DATE: 90/07/24 NOTARIZED: NO DOCKET #  
 FACIL:STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529  
 AUTH.NAME AUTHOR AFFILIATION  
 BRADISH,T.R. Arizona Public Service Co. (formerly Arizona Nuclear Power  
 LEVINE,J.M. Arizona Public Service Co. (formerly Arizona Nuclear Power  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-007-00:on 900625,inadvertent control room ventilation  
 isolation ESF actuation.

W/9 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Standardized plant.

05000529

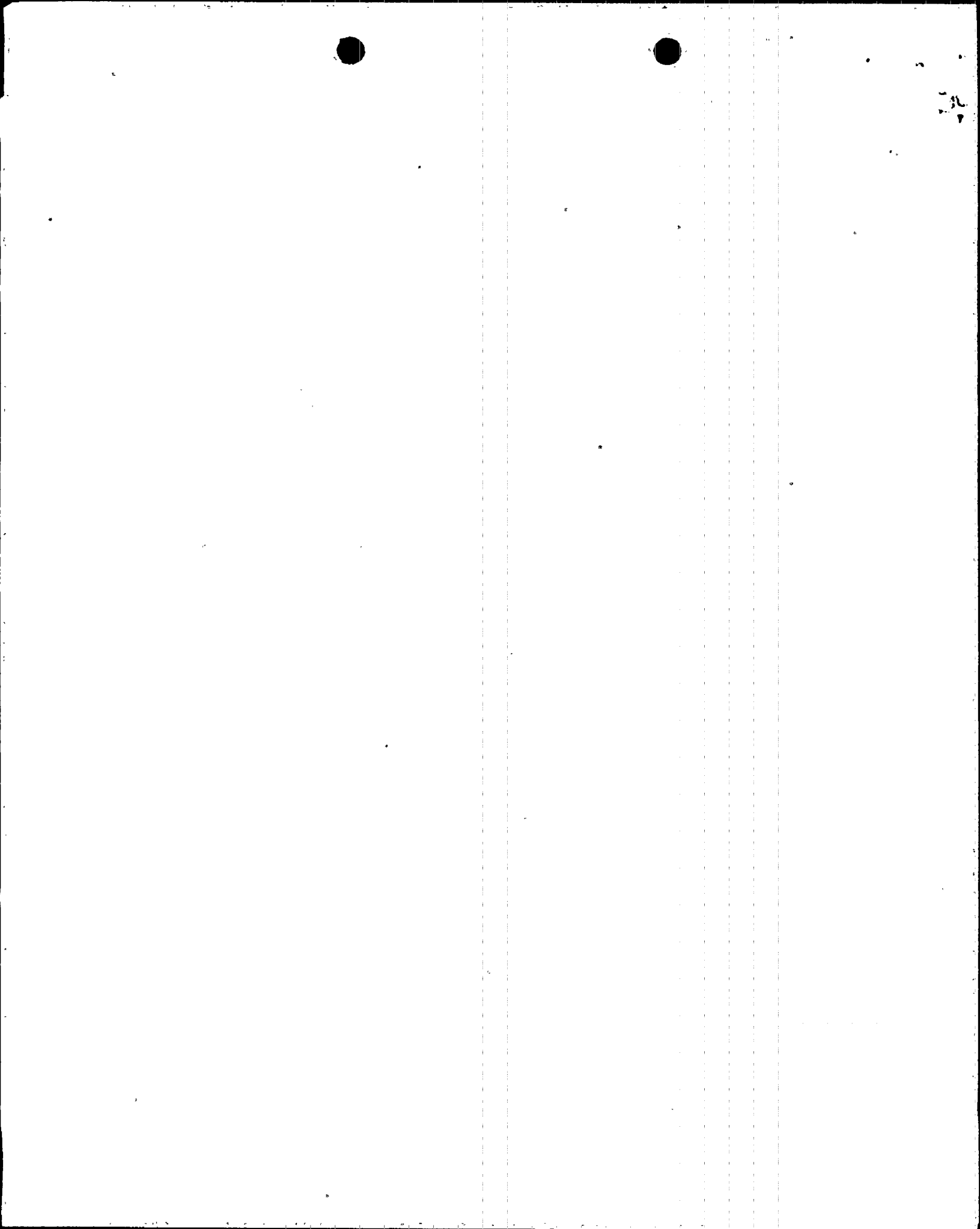
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	PD5 LA	1 1	PD5 PD	1 1
	PETERSON,S.	1 1	CHAN,T	1 1
INTERNAL:	ACNW	2 2	ACRS	2 2
	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2	NRR/DET/ECMB 9H	1 1
	NRR/DET/EMEB9H3	1 1	NRR/DLPQ/LHFB11	1 1
	NRR/DLPQ/LPEB10	1 1	NRR/DOEA/OEAB11	1 1
	NRR/DREP/PRPB11	2 2	NRR/DST/SELB 8D	1 1
	NRR/DST/SICB 7E	1 1	NRR/DST/SPLB8D1	1 1
	NRR/DST/SRXB 8E	1 1	REG FILE 02	1 1
	RES/DSIR/EIB	1 1	RGN5 FILE 01	1 1
EXTERNAL:	EG&G BRYCE,J.H	3 3	L ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC MAYS,G	1 1	NSIC MURPHY,G.A	1 1
	NUDOCS FULL TXT	1 1		
NOTES:		1 1		

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A04



Arizona Public Service Company

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

JAMES M. LEVINE  
VICE PRESIDENT  
NUCLEAR PRODUCTION

192-00681-JML/TRB/KR  
July 24, 1990

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

143

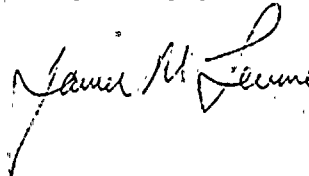
Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 2  
Docket No. STN 50-529 (License No. NPF-51)  
Licensee Event Report 2-90-007-00  
File: 90-020-404

Attached please find Licensee Event Report (LER) No. 90-007-00 prepared and submitted pursuant to 10CFR50.73. In accordance with 10CFR50.73(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. R. Bradish, Compliance Manager at (602) 393-2521.

Very truly yours,



JML/TRB/KR/tlg

Attachment

cc: W. F. Conway (all with attachment)  
J. B. Martin  
D. H. Coe  
T. L. Chan  
A. C. Gehr  
J. R. Newman  
INPO Records Center

9008010101 900724  
FDR ADOCK 05000529  
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11



## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Palo Verde Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 5 2 9				PAGE (3) 1 OF 0 5	
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TITLE (4)  
Inadvertent Control Room Ventilation Isolation ESF Actuation

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 6	2 5	9 0	9 0	0 0 7	0 0	0 7	2 4	9 0	N/A			0 5 0 0 0		
									N/A			0 5 0 0 0		

OPERATING MODE (9) 5		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11).									
POWER LEVEL (10) 0 0 1 0	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)						
	20.405(a)(1)(i)	50.38(c)(1)		50.73(a)(2)(v)	73.71(c)						
	20.405(a)(1)(ii)	50.38(c)(2)		50.73(a)(2)(vii)							
	20.405(a)(1)(iii)	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)(ix)							

LICENSEE CONTACT FOR THIS LER (12)										TELEPHONE NUMBER			
NAME Thomas R. Bradish, Compliance Manager										AREA CODE 6 0 2 3 9 3 1 - 2 5 2 1			

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	
X	J E	I L	G O 8 0	N							

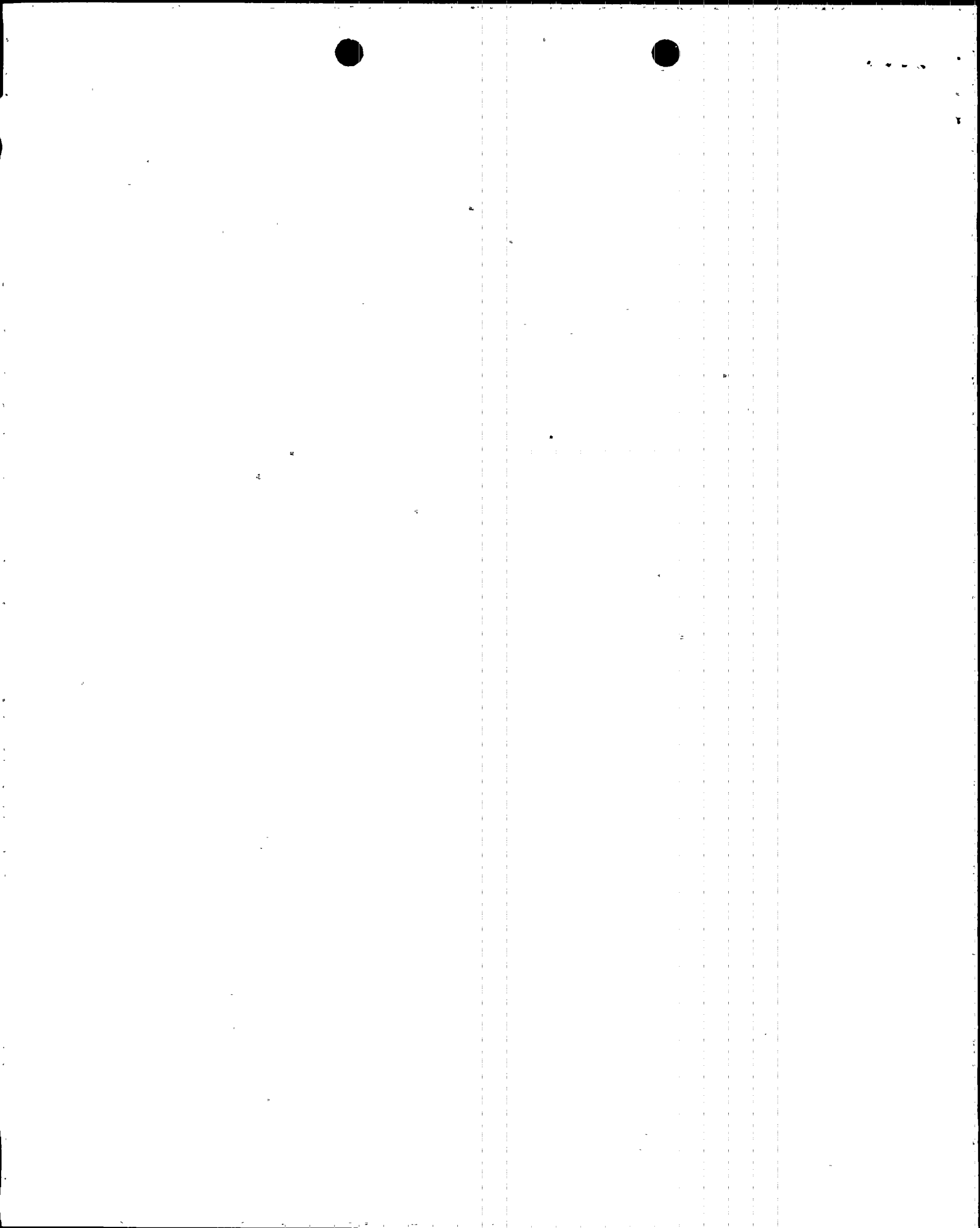
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO				

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

On June 25, 1990, at approximately 0618 MST, Palo Verde Unit 2 was in Mode 5 (COLD SHUTDOWN) during a refueling outage when a control room operator lightly tapped a Control Room Ventilation Isolation Actuation Signal (CRVIAS) Test/Bypass pushbutton during preplanned maintenance resulting in an inadvertent CRVIAS Balance of Plant Engineered Safety Features Actuation Signal (BOP ESFAS) actuation. CRVIAS is a manually initiated ESF and therefore cannot be the result of an automatic actuation. The ESF actuation was verified not to be the result of a valid condition. All components responded properly to the actuation signal. CRVIAS signal was reset, all actuated components were returned to their normal configuration, and maintenance was continued.

The apparent cause of the CRVIAS actuation was a result of a reactor operator lightly tapping the pushbutton to check if an unlit CRVIAS Bypass indicator lamp was loose. During troubleshooting, the event could not be recreated and no deficiencies were identified. The cause is indeterminate. The unlit indicator lamp was replaced.

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



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)	PAGE (3)												
Palo Verde Unit 2	0   5   0   0   0   5   2   9	<table border="1"><tr><td data-bbox="997 327 1080 358">YEAR</td><td data-bbox="1080 327 1113 358"></td><td data-bbox="1113 327 1229 358">SEQUENTIAL NUMBER</td><td data-bbox="1229 327 1262 358"></td><td data-bbox="1262 327 1328 358">REVISION NUMBER</td><td data-bbox="1328 327 1361 358"></td></tr><tr><td data-bbox="997 358 1080 418">9   0</td><td data-bbox="1080 358 1113 418">-</td><td data-bbox="1113 358 1229 418">0   0   7</td><td data-bbox="1229 358 1262 418">-</td><td data-bbox="1262 358 1328 418">0   0</td><td data-bbox="1328 358 1361 418"></td></tr></table>	YEAR		SEQUENTIAL NUMBER		REVISION NUMBER		9   0	-	0   0   7	-	0   0		0   2   OF   0   5
YEAR		SEQUENTIAL NUMBER		REVISION NUMBER											
9   0	-	0   0   7	-	0   0											

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

## I. DESCRIPTION OF WHAT OCCURRED:

## A. Initial Conditions:

At approximately 0618 MST on June 25, 1990, Palo Verde Unit 2 was in Mode 5 (COLD SHUTDOWN) with the Reactor Coolant System (RCS)(AB) at approximately 147 degrees Fahrenheit and approximately 103 pounds per square inch-absolute.

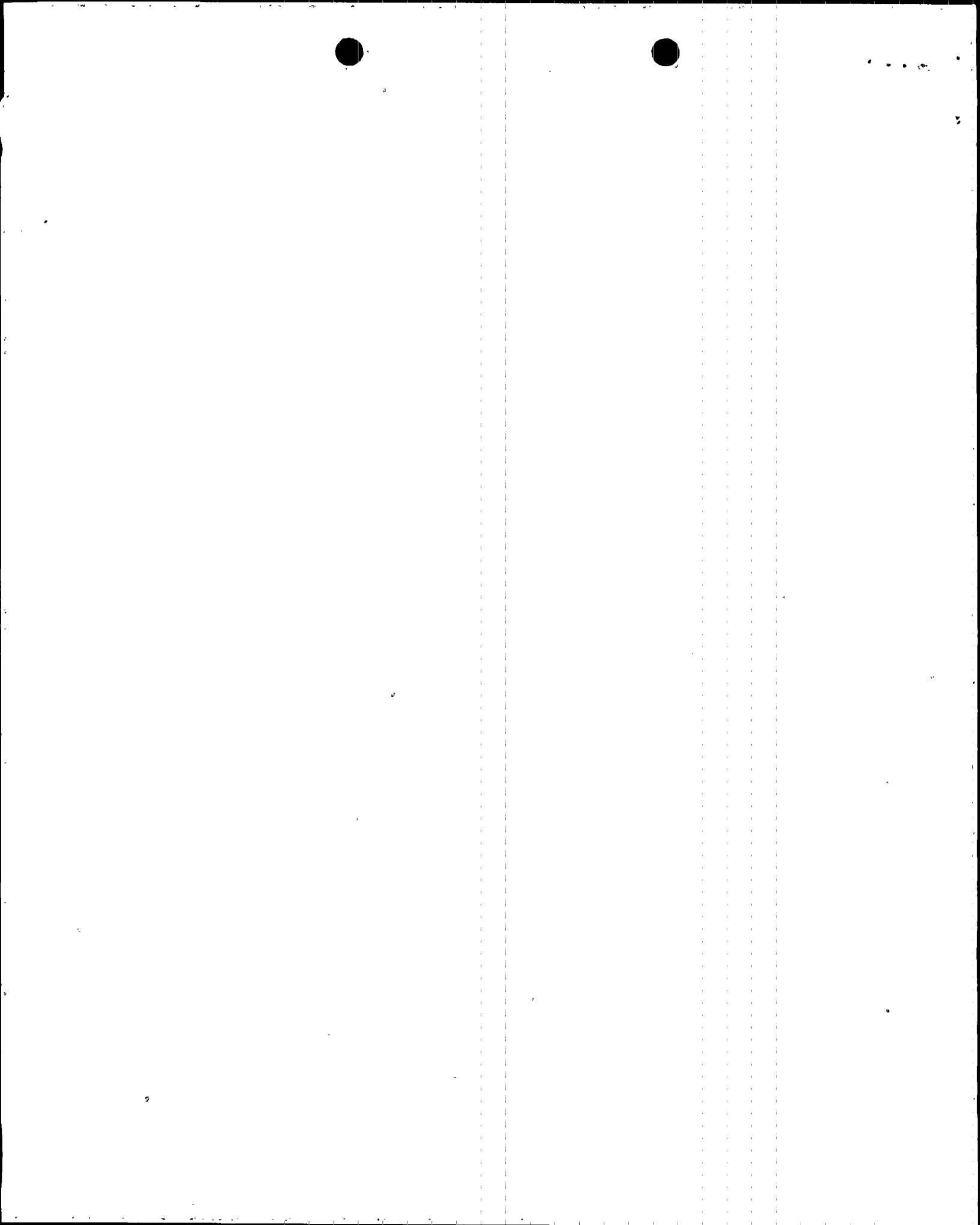
## B. Reportable Event Description (Including Dates and Approximate Times of Major Occurrences):

Event Classification: An event or condition that resulted in manual actuation of an Engineered Safety Feature (ESF)(JE).

On June 25, 1990, at approximately 0618 MST, a control room operator (utility, licensed) lightly tapped a Control Room Ventilation Isolation Actuation Signal (CRVIAS)(VI) Test/Bypass pushbutton during preplanned maintenance resulting in an inadvertent Train "A" CRVIAS Balance of Plant Engineered Safety Features Actuation Signal (BOP ESFAS) actuation. CRVIAS is a manually initiated ESF and therefore cannot be the result of an automatic actuation. Control room personnel (utility, licensed) verified that the actuation was not the result of a valid condition. All components responded properly to the actuation signal. CRVIAS signal was reset, all actuated components were returned to their normal position, and maintenance was continued.

Prior to the event described above, operations personnel (utility, licensed) were preparing to de-energize the Train "A" 120 Volt AC Class 1E Instrument and Control Distribution Panel (NA)(JL) for preplanned maintenance during the refueling outage. In accordance with an approved procedure, instructions to prevent unwanted actuations during de-energization included placing the BOP ESFAS modules in bypass. The BOP ESFAS is a digital logic system used for monitoring key BOP process signals and actuation of ESF systems. There are two (2) redundant BOP ESFAS Trains, "A" and "B". The CRVIAS actuation module provides the capability to manually isolate the control room ventilation when smoke is detected at its outside air intake.

In accordance with an approved procedure, an assigned reactor operator (utility, licensed) and an assistant shift supervisor (utility, licensed) went to the BOP ESFAS Train "A" Cabinet to place Control Room Essential Filtration Actuation Signal (CREFAS)(JE)(VI), Containment Purge Isolation Actuation Signal (CPIAS)



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)
		YEAR SEQUENTIAL NUMBER REVISION NUMBER	
Palo Verde Unit 2	0 5 0 0 0 5 2 9	9 0 - 0 0 7 - 0 0	0 3 OF 0 5

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

(JE)(IK) and Fuel Building Essential Ventilation Actuation Signal (FBEVAS) (JE)(VG) in bypass. In accordance with the procedure and prior to placing the BOP ESFAS modules in bypass, the reactor operator performed a lamp test on the BOP ESFAS Train "A" Cabinet to verify that all the indicator lamps would light. The reactor operator noted that the CRVIAS Module Bypass 1 indicator lamp did not illuminate. Because the indicator lamp is part of the pushbutton assembly, the reactor operator lightly tapped the CRVIAS Test 1/Bypass 1 pushbutton to check if the indicator lamp was loose. This action inadvertently resulted in a Train "A" CRVIAS BOP ESFAS actuation. The reactor operator and the assistant shift supervisor observing the process stated that the pushbutton was not depressed.

This event did not occur as a result of an automatic actuation as CRVIAS can only be manually initiated by control room personnel in accordance with approved procedural controls (i.e., there are no automatic actuation signals associated with CRVIAS). Following verification that all components actuated as designed, control room personnel reset Train "A" CRVIAS signal at approximately 0637 MST and returned actuated components to their normal alignment for the existing plant conditions at approximately 0730 MST.

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

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:

The cause of the indicator lamp being unlit was due to normal end of life.

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

The unlit indicator lamp did not affect the system's ability to properly function.

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

Not applicable - no component failures with multiple functions were involved.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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		YEAR 9   0	SEQUENTIAL NUMBER - 0   0   7	REVISION NUMBER - 0   0	0   4 OF 0   5		

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

- G. For a 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 which rendered a train of a safety system inoperable.

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

The unlit indicator lamp was discovered by the reactor operator during preplanned maintenance as described in Section I.B.

- I. Cause of event

The apparent cause of the CRVIAS actuation was a result of a reactor operator lightly tapping the unlit CRVIAS Test 1/Bypass 1 pushbutton to check if the indicator lamp was loose. During troubleshooting, the CRVIAS actuation could not be recreated by similarly tapping the pushbutton and no deficiencies could be identified. The cause is indeterminate (SALP Cause Code X).

No unusual characteristics of the work location (e.g., noise, heat, poor lighting) directly contributed to this event. The event was not the result of personnel errors nor procedural errors.

- J. Safety System Response:

Control Room Ventilation Isolation Train "A" (VI) System.

- K. Failed Component Information:

General Electric Model 387 miniature lamp, midget flanged base, 28 volt, 0.04 amp.

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

There were no safety consequences or implications resulting from the event described in this LER. The ESF actuation was verified not to be the result of a valid condition. CRVIAS is a manually initiated ESF and therefore cannot be the result of an automatic actuation. All components responded properly to the actuation signal and would have performed to maintain control room habitability.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	

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

## III. CORRECTIVE ACTION:

## A. Immediate:

A work repair document was initiated to troubleshoot and repair, as necessary, the test/bypass pushbutton. No deficiencies were identified with the pushbutton (i.e., the pushbutton functioned properly). Operations personnel (utility, licensed) replaced the indicator lamp after the troubleshooting was completed.

## B. Action to Prevent Recurrence:

An independent investigation of this event has been conducted in accordance with the PVNGS Incident Investigation Program. No further actions to prevent recurrence have been developed based upon the results of this independent evaluation.

## IV. PREVIOUS SIMILAR EVENTS:

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

