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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 89-005-02:on 890310,loss of power to alternate plant ventilation effluent readiation monitor occurred.

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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

192-00693-JML/TRB/RJR
September 29, 1990

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 2
Docket No. STN 50-529 (License No. NPF-51)
Licensee Event Report 89-005-02
File: 90-020-404

Attached please find Supplement Number 2 to Licensee Event Report (LER) No. 89-005 prepared and submitted pursuant to 10CFR50.73. This report is being submitted to update the scheduled date for implementing a design modification. The schedule has been revised due to material delays. In accordance with 10CFR50.73(d), we are 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,

James M Levine

JML/TRB/RKR/dmn

Attachment

cc: W. F. Conway (all with attachment)
J. B. Martin
D. H. Coe
A. C. Gehr
A. H. Gutterman
INPO Records Center

IE22
1/1

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH 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)	DOCKET NUMBER (2)	PAGE (3)
Palo Verde Unit 2	0 5 0 0 0 5 2 9	1 OF 0 6

TITLE (4)

Loss of Power to Alternate Plant Ventilation Effluent Radiation Monitor

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 3	1 0	8 9	8 9	0 0 5	0 2	0 9	2 9	9 0	N/A	0 5 0 0 0
									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 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
	AREA CODE
Thomas R. Bradish, Compliance Manager	6 0 2 3 9 3 - 2 5 2 1

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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)

On March 10, 1989, at approximately 2200 MST, Palo Verde Unit 2 was in Mode 1 (POWER OPERATION) at approximately 100 percent power when a Chemistry Effluent Technician (contractor, non-licensed) discovered that the Preplanned Alternate Sampling System (IL) for the Plant Ventilation was inoperable. The circuit breaker, which supplies the electrical power (EC), had opened and deenergized the alternate system. With the alternate sampling inoperable, Unit 2 operated in a condition contrary to Technical Specification (TS) 3.3.3.8. At approximately 2210 MST, the power to the Preplanned Alternate Sampling System power was restored. No safety system responses occurred and none were necessary.

The cause of the event was electrical loads in excess of the circuit capacity resulting in the circuit breaker which supplied electrical power opening. A Design Modification has been issued to install dedicated alternate sample systems to radiation monitors RU-141, RU-143 and RU-145.

Similar events were reported in LER 529/87-14, 529/88-13, 530/88-07, and 528/89-03.

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

On March 10, 1989 at approximately 2200 MST, Palo Verde Unit 2 was in Mode 1 (POWER OPERATION) at approximately 100 percent power.

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

Event Classification: Condition Prohibited by the Plant's Technical Specification (TS)

On March 10, 1989, at approximately 2200 MST, a Chemistry Effluent Technician (contractor, non-licensed) discovered that the Preplanned Alternate Sampling Program (PASP)(IL) for the Plant Ventilation (VL) was inoperable. The circuit breaker, which supplies the electrical power (EC), had opened and deenergized the alternate system. With the alternate sampling system inoperable, Unit 2 operated in a condition contrary to TS 3.3.3.8.

Prior to the event, on December 6, 1989 at approximately 0700 MST, the normal Plant Ventilation low and high range effluent monitors (RU-143 and RU-144)(IL) were declared inoperable due to intermittent spiking of the low range detector (RU-143). Appropriate actions were initiated in accordance with approved procedures. These actions included the installation of the Preplanned Alternate Sampling System on a portable cart within one hour in accordance with TS 3.3.3.8 ACTION 37 and 40. The alternate sampling system taps into the Plant vent and utilizes a particulate and charcoal cartridge for sample collection with an in-line flow gauge and sampling pump. The alternate sampling system is electrically powered from a local outlet.

Following the installation of the alternate sampling system, the process and sample flow rates were verified a minimum of every four hours pursuant to TS 3.3.3.8 ACTION 36. On March 10, 1989, at approximately 2005 MST, a process and alternate sampling system flow check was performed. At this time, the alternate sampling system was energized and operable.

During conduct of a PASP cart flowrate check at approximately 2200 MST, a Chemistry Technician (contractor, non-licensed) discovered that the PASP sample cart had lost power. The Chemistry Technician started a portable electric generator and restored

power to the sample cart at approximately 2210 MST.

At approximately 2220 MST, the Chemistry Technician notified the Shift Supervisor (utility, licensed) of the loss of power to the sample cart. The Shift Supervisor dispatched an Auxiliary Operator (utility, non-licensed) to reset the electrical breaker that supplied the affected outlets; and this was accomplished at approximately 2230 MST. The Chemistry Technician then transferred the power supply back to the normal outlet.

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

As stated in Section I.B, the Plant Ventilation Radiation Monitors, RU-143 and RU-144 were inoperable for corrective maintenance. No other structures, system, or components were inoperable at the start of the event that contributed to the event.

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

Not applicable - no component or system failures were involved. However, as stated in Section I.B, electrical power to the alternate sampling system was interrupted when the circuit breaker opened.

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

Not applicable - no failures were noted.

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 failures that rendered a train of a safety system inoperable, estimated time elapsed from the discovery of the failure until the trains were returned to service:

Not applicable - no failures were involved. However, the alternate sampling system was discovered inoperable on March 10, 1989 at approximately 2220 MST. The alternate sampling system was made operable at approximately 2210 MST. The total elapsed time was approximately 10 minutes.

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

Not applicable - no component or system failures or procedural errors were involved.

I. Cause of Event:

The root cause of the event was temporary and permanent electrical loads in excess of the circuit capacity. In response, the circuit breaker opened and caused a loss of electrical power to the alternate sampling system. Without electrical power, the sampling pump can not draw a sample from the Plant Ventilation.

J. Safety System Response:

Not applicable - no safety system responses occurred and none were necessary.

K. Failed Component Information:

Not applicable - no component failures were involved.

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

No adverse safety consequences or implications resulted from this event. The alternate system was determined to be inoperable for up to one hour and 55 minutes. Upon discovery of the loss of power, the alternate sampling system power was restored within approximately ten minutes. The TS 3.3.3.8 ACTION 40 permits 1 hour to install the alternate sampling system. No significant radiation levels were measured before or after the event.

III. CORRECTIVE ACTIONS:

A. Immediate

Power was restored to the alternate sampling system.

B. Action to Prevent Recurrence:

A Design Modification has been issued to install dedicated alternate sample systems to radiation monitors RU-141, RU-143 and

RU-145. The alternate sample systems will be supplied by dedicated power. Implementation of the design modification in Units 1, 2, and 3 was originally expected to be completed by September 30, 1990, however due to material delays the modification is expected to be completed by December 1990.

As interim corrective action while awaiting the plant change, power has been supplied to the PASP sample carts from a welding outlet to minimize the possibility of an overload condition when RU-141 (condenser Air Removal Exhaust Radiation Monitor) or RU-143 (Plant Ventilation Exhaust Radiation Monitor) are inoperable. Additionally, when RU-141 or RU-143 are inoperable, the PASP sample cart is electrically powered such that a loss of this power will provide an alarm in the Control Room. The RMS Sample Collection Procedure for all three units has been changed to require that when PASP equipment cannot be connected to the alarm computer in the control room, chemistry personnel inform the control room which electrical outlets PASP equipment is powered from and request that the power supplies for the PASP equipment (when it is in use) be caution tagged to alert personnel that Technical Specification required equipment is connected to these power supplies.

IV. PREVIOUS SIMILAR EVENTS:

Four previous events have occurred which are similar to the event:

1) LER 529/87-014 described an event where the alternate sampling system for the Fuel Building Ventilation Radiation Monitor (RU-145) had been turned off and rendered inoperable. As corrective action to prevent recurrence, a placard was installed on the cart which identifies the cart as a Technical Specification piece of equipment. Since the event described in this LER involves the overloading and subsequent tripping of the power supply breaker, the corrective action described in LER 87-014 would not have prevented the event described in this LER.

2) LER 529/88-013 described an event where the alternate sampling system for Normal Plant Ventilation Radiation Monitor (RU-143) had been rendered inoperable when the circuit breaker opened. As corrective action to prevent recurrence, an Engineering Evaluation Request was issued to evaluate the feasibility of supplying alternate power to the loads. This evaluation had progressed to the point of a conceptual study when this event occurred and thus,

did not prevent the event.

3) LER 530/88-007 described an event where the alternate sampling system for the Condenser Vacuum Pump/Gland Seal Exhaust Radiation Monitor (RU-141) became electrically disconnected from a nearby electrical outlet and thus, rendered inoperable. As action to prevent recurrence, the involved individual was counseled, additional training was performed, and enhanced labeling for the sample cart was developed. Additionally, an evaluation was initiated to upgrade the installation of the sample cart. The evaluation discussed is part of the conceptual study discussed as corrective action in Section III.B of this LER. Installation of these upgrades would not have prevented the event described in this LER. Also, counseling, training, and labeling would not have prevented the event discussed in this LER.

4) LER 528/89-003 described an event where the alternate sampling system for the Fuel Building Exhaust Radiation Monitor (RU-145) became inoperable when the circuit breaker opened. As corrective action to prevent recurrence, a Design Modification had been issued to supply dedicated power to the alternate sample system. Implementation of this change is expected by December 1990. Since this change has not been installed in the unit, it did not prevent this event.