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SUBJECT: RO 1-SR-89-004:on 890423,electronic private automatic branch exchange telephone sys failed.

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192-00470-JGH/TDS/RJR
April 28, 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)
Special Report 1-SR-89-004
File: 89-020-404

Attached please find Special Report 1-SR-89-004 prepared and submitted pursuant to Emergency Plan Implementing Procedure -03. This report discusses a NOTIFICATION OF UNUSUAL EVENT due to a loss of communication capability.

If you have any questions, please contact T. D. Shriver, Compliance Manager at (602) 393-2521.

Very truly yours,

for
J. G. Haynes
Vice President
Nuclear Production

JGH/TDS/RJR/kj

Attachment

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PALO VERDE NUCLEAR GENERATING STATION UNIT 1

NOTIFICATION OF UNUSUAL EVENT

License No. NPF-41

Docket No. 50-528

Special Report No. 1-SR-89-004

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

On April 23, 1989 Unit 1 was in Mode 5 (COLD SHUTDOWN), Unit 2 was in Mode 3 (HOT STANDBY), and Unit 3 was in refueling with the core offloaded.

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

Event Classification: Notification of Unusual Event.

On April 22, 1989 at approximately 1811 MST, 1ENANS05J breaker was opened which deenergized the telecommunications battery charger. At approximately 0530 MST on April 23, 1989, Security personnel (utility, non-licensed) informed the control room of problems with the telephone system. At approximately 0705 MST the Shift Supervisor (utility, licensed) determined that the Electronic Private Automatic Branch Exchange (EPABX) telephone system had failed. At 0905 MST a Notification of Unusual Event was declared.

An outage of non-class bus 1ENANS05 was scheduled for the week of April 24, 1989.. On April 21, 1989, the Electrical Systems Outage Coordinator (utility, non-licensed) informed Administrative Services personnel (utility, non-licensed), the Water Reclamation Facility Shift Supervisor (utility, non-licensed) and the Computer Group personnel (utility, non-licensed) of the short term power outage while installing temporary power. The Telecommunications Department responsible for the communication system was not notified at this time.

On April 22, 1989, Unit 1 Operations personnel (utility, licensed and non-licensed) were implementing a clearance to allow temporary power installation for support of a scheduled outage on 1ENANS05. At approximately 1811 MST, the 1ENANS05J breaker was opened in accordance with the clearance.

AENGNL45 is a load center supplied by 1ENANS05 through the 1ENANS05J breaker. The loss of this load center caused the loss of power to the battery charger for the telecommunications equipment. This resulted in a "Battery Charger Trouble Alarm" in the Unit 1 Control Room. The Reactor Operator (utility, licensed) informed the Shift Supervisor (utility, licensed), reviewed the alarm response procedure and determined that no action was required since he expected the alarm as a result of the breaker being open. This also placed the telecommunications equipment on battery power. The batteries are rated for 8 hours.

At 2207 MST the clearance was installed and ready for acceptance by Central Maintenance personnel (utility, non-licensed). The Central Maintenance personnel were working on maintenance not related to the clearance and did not immediately turn their attention to acceptance of the clearance discussed herein. Thus, the clearance was accepted and work commenced at approximately 0200 MST. At approximately 0530 MST Security personnel (utility, non-licensed) notified the control room of problems with the EPABX telephone system. Telecommunications personnel (utility, non-licensed) were notified and, at approximately 0600 MST, personnel were dispatched from the off-site Telecommunications Department to determine the problem. At approximately 0705 MST the Shift Supervisor (utility, licensed) determined that the PABX telephone system had failed.

At approximately 0730 MST Telecommunications personnel (utility, non-licensed) disconnected the batteries due to a concern of possible equipment damage at the degraded voltage. At approximately 0804 MST the Nuclear Regulatory Commission was notified of the loss of communications on the Emergency Notification System (ENS).

The Unit 1 Plant Manager and the Manager of Emergency Planning reviewed the situation and concluded this represented a Notification of Unusual Event. This decision was based on the following:

1) Loss of the normal telephones for communication.

2) Although portable radio communication was available, several areas in the unit exist where these radios will not communicate. The normal telephones are used as the primary communication tool in these areas.

3) Inability to activate the autodialer. The autodialer provides an automatic comprehensive notification system to all off site emergency response personnel. The group pager which was available acts as an expeditious simultaneous notification system to the required key emergency response personnel.

4) The emergency phone system (NEAX-12) was believed to be not available. The actual availability on the NEAX-12 is still under investigation.

At approximately 0905 MST on April 23, 1989 Unit 1 declared a site Notification of Unusual Event.

At approximately 1018 MST, load center AENGNL45 was energized and at approximately 1030 MST power was restored to the PABX telephone system. The Notification of Unusual Event was terminated at approximately 1134 MST on April 23, 1989.

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

Not applicable - No 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 was 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 failures 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 safety system was rendered inoperable as a result of this event.

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

The loss of communications was discovered by Security personnel (utility, non-licensed) while attempting to use the PABX system.

I. Cause of Event:

The cause of the event was an undefined process for notification of personnel outside of Unit 1 when a power loss will affect systems outside the unit.

The personnel notified by the Electrical Systems Outage Coordinator (utility, non-licensed) were done from memory. The Telecommunications personnel were not notified.

Additional causal factors identified include inadequate Alarm Response procedure for the "Battery Charger Trouble Alarm" and an inadequate drawing of the ancillary building loads.

J. Safety System Response:

Not applicable - No safety system response was necessary.

K. Failed Component Information:

Not applicable - There were no failed components associated with this event.

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

The Electronic Private Automatic Branch Exchange comprises the telephone system for normal and off-site communications. Although the degraded communications may have hampered response in a unit emergency, the following known communications remained to perform actual assessment and notifications of any occurrence.

1. Emergency Notification System (ENS)
2. Notification Alert Network (NAN)
3. Off-site pager system
4. Internal portable radios
5. A cellular phone located in each unit
6. Security phones to the local law enforcement agencies

During the event no emergency in any of the three units existed. Therefore, this event does not represent any threat to the health and safety of the public. Had a unit emergency been in progress concurrently with this event, sufficient communication remained to ensure the health and safety of the public.

III. CORRECTIVE ACTIONS:

A. Immediate:

Immediate corrective action was taken to restore the lost communications equipment. At approximately 1030 MST Telecommunciations personnel had successfully restored the necessary equipment. At approximately 1134 MST after functional testing, the Notification of Unusual Event was terminated.

A letter has been promulgated to define the notification process for bus outages that may effect systems outside of the unit.

B. Action to Prevent Recurrence:

The notification process discussed in Section III.A will be incorporated into the appropriate administrative procedure.

A dedicated team has been formed to investigate this event, determine causal factors, and recommend corrective action. The corrective actions from this team will be incorporated as deemed appropriate by management.

IV. PREVIOUS SIMILAR EVENTS:

There have been no previous similar events reported.