UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE
WALNUT CREEK, CALIFORNIA 94596-5368

JUN - 5 1992

Docket No. 50-530
License No. NPF-74

Arizona Public Service Company
P.O. Box 53999, Station 9012
Phoenix, Arizona 85072-3999

Attention: Mr. W. F. Conway
Executive Vice President, Nuclear

SUBJECT: NRC INSPECTION REPORT 50-530/92-19

On May 8 - 14, 1992, an NRC Region V Augmented Inspection Team (AIT) conducted an inspection at the Palo Verde Nuclear Generating Station, Unit 3. The AIT examined activities authorized by NRC License NPF-74. At the conclusion of the inspection, on May 14, the inspectors held a discussion of their findings with you and members of your staff identified in the enclosed report.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

The AIT found that the event, the loss of plant annunciator and alarm systems at Unit 3, could have been avoided. Three points in the work process were identified as missed opportunities to prevent the event:

1. The work planner failed to review archived documents as required prior to issuing the work order. As a result, the planner failed to notice that the circuit breaker continuity check that initiated the event had been previously performed, and that a repeat of the check was not necessary.

2. The work planner modified Engineering Department instructions, which originally asked for continuity checks on spare breakers only, to require performing continuity checks on active breakers, without obtaining Engineering review and concurrence for the instruction modification.

3. The electricians implementing the work order disconnected a lead, an action not specifically required by the work order.

The team observed that the programs and procedures governing non-safety related maintenance work apply equally to safety-related maintenance. The team, therefore, concluded that the findings noted above could also be applicable to safety-related maintenance. The team further concluded that a lack of intrusive supervisory involvement in the initiation and performance of routine, balance-of-plant electrical work was an underlying root cause of the event, common to each missed opportunity.

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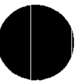
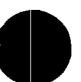



In addition, the AIT found that the electricians failed to implement necessary safety precautions for preventing accidental equipment damage. Inadvertent contact of the electrical lead with other circuits would have been avoided by either (1) installing rubber or canvas blankets over the nearby 480 vac electrical bus work, or (2) exerting positive controls to capture and restrain the electrical lead upon disconnection from the terminal board.

The AIT found this failure to take adequate safety precautions to be of particular note, because the resultant short circuit and ensuing event (1) significantly degraded the Control Room operators' ability to monitor plant parameters, (2) impacted plant computer capability for automatic calculation of plant safety limits, invoking license requirements for reducing plant power, and (3) called into question the operability of the optical isolation system, which segregates safety-related and non-safety-related devices.

Recent events at your facility have occurred which, at least partially, were the result of poor practices in controlling work at Palo Verde. These include reactor trip breaker maintenance problems, the lack of Senior Reactor Operator coverage during core alterations at Unit 2, and the Unit 3 switchyard crane incident that resulted in a partial loss of offsite power. These events, combined with the findings of this AIT, raise serious questions regarding the effectiveness of your programs for defining, performing, and controlling work with the potential for impact on plant safety.

Any enforcement action resulting from this inspection will be the topic of separate correspondence.

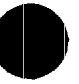
In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

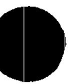
Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely,

for J. B. Martin
Regional Administrator

Enclosure: Inspection Report 50-530/92-19





cc w/enclosure:
O. Mark DeMichele, APS
J. M. Levine, APS
R. Stevens, APS
S. Guthrie, APS
E. C. Simpson, APS
R. W. Page, APS
T. R. Bradish, APS
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C. L. Hoskins, El Paso Electric Company, Phoenix, AZ.
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S. M. Olea, Chief Engineer, ARizona Corporation Commission
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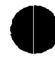
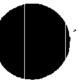
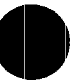

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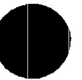
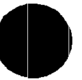
The team concluded that a lack of intrusive supervisory involvement in the initiation and performance of routine, balance-of-plant electrical work was an underlying root cause of the event, common to each missed opportunity.

In addition, the AIT found that the electricians failed to implement necessary safety precautions for preventing accidental equipment damage. Inadvertent contact of the electrical lead with other circuits would have been avoided by

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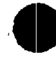
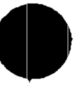
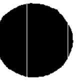
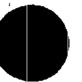
Sincerely,

J. B. Martin
Regional Administrator

Enclosure: Inspection Report 50-530/92-19

bcc w/o enclosure:
LFMB (Licensee Fee Management Branch)

bcc w/enclosure: Region V
J. B. Martin, Regional Administrator
B. Faulkenberry, Deputy Regional Administrator
M. Smith, Secretary, Regional Administrator
G. Cook, Regional Public Affairs Officer
R. Zimmerman, Director, Div. Radiation Safety & Projects
R. Scarano, Director, Div. Radiation Safety and Safeguards
S. Richards, Chief, Reactor Projects Branch
L. Miller, Chief, Reactor Projects Branch

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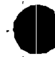
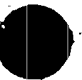
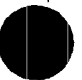

H. Wong, Chief, Projects Section II, Div. Reactor Projects
B. Olson, Palo Verde Project Inspector
Docket file
Resident Inspector (4)

bcc w/enclosure:
James Taylor, Executive Director of Operations, EDO
James H. Sniezek, Deputy Executive Director Nuclear Reactor Regulation, Regional Operations & Research, OEDO
C. Calvo, Region V Contact, OEDO
David A. Ward, Chairman, Advisory Committee on Reactor Safeguards (ACRS)
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Edward L. Jordan, Director, AEOD
Denwood F. Ross, Deputy Director, AEOD
Director, DRP, RI, II, III, IV

Region V/ann

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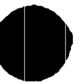
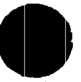
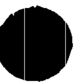

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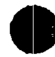

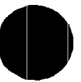

bcc w/enclosure:
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C. Calvo, Region V Contact, OEDO
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Forrest J. Remick
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Alfred E. Chaffee, Chief, Events Assessment Branch, Div. Operational Events Assessment, NRR
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| DKirsch | MRoyack | RQualls | DAcker |
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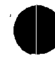
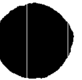
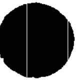
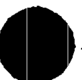

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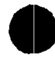
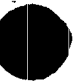
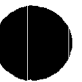
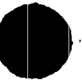

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C. Calvo, Region V Contact, OEDO
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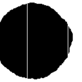
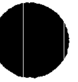

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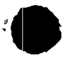

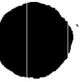
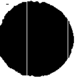
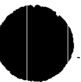

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