U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/87-16
50-529/87-17
50-530/87-18

Docket Nos. 50-528, 50-529, and 50-530

License Nos. NPF-34, NPF-51, and NPF-65

Licensee: Arizona Public Service Company
P.O. Box 21666
Phoenix, Arizona 85836

Facility Name: Palo Verde Nuclear Generating Station, Units 1, 2 and 3

Inspection at: Palo Verde Site - Wintersburg, Arizona

Inspection Conducted: April 27 - May 1, 1987

Inspected by: R. F. Fish for — 5/15/87
G. Brown, Emergency Preparedness Analyst — Date Signed

Approved By: R. Fish — 5/15/87
R. Fish, Chief
Emergency Preparedness Section — Date Signed

Summary:

Areas Inspected: Routine unannounced inspection of licensee action on previous inspection findings, parts of the licensee's emergency planning program regarding emergency detection and classification, protective action decisionmaking, notifications and communications, and changes to the emergency preparedness program. Inspection procedures addressed included: 82201, 82202, 82203, 82204, and 92701.

Results: No deficiencies or violations of NRC requirements were identified.

DETAILS

1. Persons Contacted

*E. Van Brunt, Executive Vice President
*J. Driscoll, Assistant Vice President
*J. Bynum, Plant Manager
J. Allen, Manager Operations Department
*R. Baron, Compliance Supervisor
*T. Barsuk, Supervisor, Site Emergency Planning
E. Bethke, Shift Supervisor, Unit 2
L. Cook, Operations Technician
L. Hampton, Operations Technician
J. Kyle, Arizona Department of Emergency Services
D. Milstead, Arizona Department of Public Safety
D. Nichols, General Training Supervisor
J. Niedermeyer, Shift Supervisor, Unit 1
V. Rhodes, Drawing and Document Control Supervisor
G. Sanks, Radiation Protection Engineer
*T. Shriver, Compliance Manager
*L. Souza, Assistant Director, Corporate QA/QC
*J. Vorees, Manager, Nuclear Safety Department
J. Wolfong, Radiation Protection Engineer
D. Yows, Manager, Emergency Planning and Preparedness

*Denotes attendance at the May 1, 1987 exit interview

2. Follow-Up On Open Items

(Closed) 87-01-02. Install ENS for Unit 3 prior to fuel load. The Unit 3 ENS was installed and functional prior to fuel load. This item is closed.

(Closed) 87-01-06. Decontamination facilities must be functional prior to 5% power. Installation of sinks and drains were the remaining outstanding items noted in the previous inspection report (No. 50-530/87-11). They have been installed. Both East and West Decontamination Rooms are now stocked and functioning. This item is closed.

(Closed) 87-01-09. Revise EPIP-02, EPIP-03, and EPIP-04 to more clearly reflect NRC guidance. EPIP-02 failed to note certain key responsibilities of the Emergency Coordinator. Section 4.1.7 of EPIP-02 has been modified to include these responsibilities. EPIP-03 and EPIP-04 did not clearly specify that the NRC is to be notified immediately after notification of State and local agencies but not later than one hour after declaration of an emergency event. Section 3.3 of EPIP-03 and Section 1.11 of EPIP-04 have been modified to more clearly define this action. This item is closed.

(Open) 86-15-01. Radiation monitoring instruments are located in the wrong TSC vent duct. The licensee has completed all design work and is now in the site modification phase which includes TSC air flow balancing.

Remaining actions include completion of the review and signature process and implementation. Expected completion date is approximately June 15, 1987. This item remains open.

(Open) 86-15-02. Provide a backup communication system that would survive a loss of the communications room. Construction work to lay the lines has begun. Expect completion in September 1987. THis item remains open.

(Open) 86-15-08. Connect the plant vent monitor to a vital bus. Unit 2 work is completed. The work order for Unit 1 has been written and is now being reviewed. Unit 3 is awaiting an electrical outage to complete the connection. This item remains open.

(Open) 87-01-01. PASS technician training and qualification must be completed prior to 5% power. Eleven technicians have completed the classroom portion of the training and twelve technicians have completed the hands-on portion of the training. The licensee expects all technicians to be trained and qualified by the time the Startup organization releases the Unit 3 PASS. This item remains open.

3. Follow-up on Information Notices

The inspector verified that the following Information Notices were received by the licensee, reviewed for applicability, distributed to cognizant corporate and site personnel and corrective actions were taken where appropriate.

(Closed) IN-86-97. Emergency Communications System

(Closed) IN-86-98. Offsite Medical Services

4. Emergency Detection and Classification

This program area was inspected to determine whether the licensee used and understood a standard emergency classification and action level scheme that met the requirements in 10 CFR 50.47(b)(4) and 10 CFR Part 50, Appendix E, Sections IV.B and IV.C.

The inspector reviewed the licensee's classification procedure, EPIP-02, "Emergency Classification". The event classifications in the procedure were consistent with those required by regulation. The classification procedures did not appear to contain impediments or errors which could lead to incorrect or untimely classification.

Selected emergency action levels (EALs) specified in the procedures were reviewed. The reviewed EALs appeared to be consistent with the initiating events described in Appendix 1 of NUREG-0654. The inspector noted that some of the EALs were based on parameters obtainable from Control Room instrumentation.

The inspector verified that the licensee's notification procedures included criteria for initiation of offsite notifications and for development of protective action recommendations. The notification

procedures required that offsite notifications be made promptly after declaration of an emergency.

The inspector discussed with licensee representatives the coordination of EALs with State and local officials. Licensee documentation and personal interviews with applicable state and local officials verified that the licensee had presented the current EALS to the offsite agencies in April, 1987, and that these officials agreed with the EALs used by the licensee.

Interviews were held with two shift supervisors to verify that they understood the relationship between core status and high-range effluent monitors. Both interviewees appeared knowledgeable of the core damage indications and their relationship to core status.

The responsibility and authority for classification of emergency events and initiation of emergency actions were prescribed in licensee procedure EPIP-02, "Emergency Classification", and in the emergency plan. Interviews with selected personnel who may be required to implement this procedure revealed that they understood their responsibilities and authorities related to accident classifications, notification, and protective action recommendations.

Walk-through evaluations involving accident classification problems were conducted with two Shift Supervisors. Both individuals promptly and properly classified the hypothetical accident situations presented to them, and appeared to be familiar with appropriate classification procedures.

No violations or deviations were identified in this program area.

5. Protective Action Decisionmaking

This area was inspected to determine whether the licensee had continuous capability to assess and analyze emergency conditions and make recommendations to protect the public and onsite workers. The related requirements are contained in 10 CFR 50.47(b)(9) and (10) and 10 CFR Part 50 Appendix E, Section IV.D.3.

Walk-throughs were conducted with two onshift Satellite Technical Support Center (STSC) teams consisting of a Shift Supervisor/Emergency Coordinator, a Communications Operator and a Radiation Protection Monitor (RPM). The teams were given a radiological oriented scenario designed to test training in protective action decisionmaking, search and rescue, potassium iodide administration, authorizing emergency exposure and habitability of emergency response facilities. Even though the teams had not worked together before the walk-through, they addressed the problem in a manner sufficient to ensure protection of the health and safety of the public. The radiation protection monitors, however, appeared to need additional training in some areas which are included in their responsibilities shown in the emergency plan. For instance, in response to the scenario the teams would have dispatched a search and rescue team without consulting the appropriate procedure, did not consider potassium iodide administration despite such guidance in the procedures, and did not consult the appropriate procedure for guidance when authorizing emergency

exposures. As a result, the hypothetical search and rescue team members may not have received a proper briefing, accumulated quarterly/annual exposures would not have been obtained as required, they would not have been directed to wear proper dosimetry as required, nor would they have been advised on use of iodine protection. In addition, the OSC would have been evacuated needlessly. An examination of the licensee's training program revealed that the RPM was provided training only in dose assessment and general TSC/EOF Staff training. The walk-throughs indicate a need for more specialized training to members of the STSC staff. Licensee response to this concern will be examined in a subsequent inspection and tracked as Open Item No. 87-16-01.

6. Notifications and Communications

This area was inspected to determine whether the licensee was maintaining a capability for notifying and communicating (in the event of an emergency) among its own personnel, offsite supporting agencies, and the population within the exposure pathway zone (EPZ). The applicable requirements are contained in 10 CFR 50.47(b)(5) and (6) and 10 CFR Part 50 Appendix E, Section IV.D.

The inspector reviewed the licensee's notification procedures EPIP-03, "Notification of Unusual Event Implementing Actions", and EPIP-04, "Alert, Site Area and General Emergency Implementing Actions". The procedures were consistent with the emergency classifications and EAL actions used by the licensee. The inspector determined that the procedures made provisions for message verification.

The inspector verified that adequate procedural means existed for alerting, notifying, and activating emergency response personnel by reviewing applicable procedures, EPIP-03 and EPIP-04, and by discussions with licensee representatives. The procedures specified when to notify and activate the onsite emergency organization and offsite agencies. Selected telephone numbers listed in the licensee's procedures for emergency response support organizations were checked in order to determine whether the listed numbers were current and correct. No problems were noted.

The content of initial emergency messages was reviewed and discussed with licensee representatives. The initial messages appeared to meet the guidance of NUREG-0654, Sections II.E.3 and II.E.4. Discussions with offsite agencies confirmed that the format and content of the initial emergency messages had been reviewed by these authorities.

The licensee's management control program for the prompt notification system was reviewed. According to licensee documentation and discussions with representatives of the Maricopa County Department of Civil Defense and Emergency Services (MCDCDES), who maintain the system, the system consists of 37 sirens located in the 10-mile plume exposure pathway. In the event of a siren failure, the program provides for dispatching an emergency vehicle and sounding its siren throughout the affected area. A review of the licensee records verified that the system as installed was consistent with the description contained in the emergency plan. Maintenance of the system had been provided for by the licensee. The

inspector reviewed siren test records for 1987 showing results of silent and growl testing. Unsatisfactory results were minimal and repair of the defective equipment was prompt. The report on the full scale annual test, conducted November 19, 1986, revealed that the licensee satisfactorily demonstrated activation from the primary and backup activation stations, and obtained 97% adequacy of the operability of the equipment. No offsite agency problems relating to the prompt notification system were noted.

Communications equipment in the Units 1 and 2 Control Room and STSC was inspected. Provisions existed for prompt communications among emergency response organizations, to emergency response personnel, and to the public. The installed communications systems at the emergency response facilities were consistent with the descriptions in the emergency plan and implementing procedures.

No violations or deficiencies were identified in this program area.

7. Changes to the Emergency Plan

This area was reviewed to determine whether changes were made to the program since the last routine inspection, and to assess how these changes affected the overall state of the emergency preparedness.

The inspector and the licensee discussed their program for reviewing changes to the emergency plan and implementing procedures to ensure that proposed changes would not result in decreasing the effectiveness of the plan. It is policy that managment within the Emergency Planning (EP) Department conducts the reviews of its own changes. Sometimes this allowed a section of the EP Department to author and perform its own review of a change. It was noted that the licensee had no explicit procedure for independent management review of changes to the emergency plan. The licensee's Quality Systems and Engineering Section of the Quality Assurance (QA) Department had also made a similar observation in their most recent program assessment audit of the emergency planning program (audit report no. PA-87-001). The licensee's response to this audit finding will be examined during a subsequent inspection.

Discussions were held with licensee representatives concerning recent modifications to facilities, equipment and instrumentation. The inspector observed some of the work on the modifications to the ventilation system in the Technical Support Center (see fourth item discussed in Section 2 of this report). It was determined that there were no other changes to the facilities, equipment or instrumentation since the last inspection. The inspector's discussion with licensee representatives also disclosed that there had been no significant changes in the organization and staffing of the offsite support agencies since the last inspection.

The inspector reviewed the licensee's program for distribution of changes to the emergency plan and procedures. Discussions with licensee representatives revealed that the Drawing and Document Control (DDC) Department was responsible for distribution of changes. The Department had divided distribution of emergency plan and procedure changes into two

categories, controlled and controlled-by-user. Controlled copies were maintained by the staff of the As-Built Records Section of DDC, while owners of controlled-by-user copies were individually responsible for incorporation of changes into their manuals. Each quarter, owners of the controlled-by-user copies were required to perform a self-audit of their documents and report the results to the Nuclear Operations Support Section of DDC. The inspector reviewed Controlled-by-user Copy No. C42 and found that, although the document had previously undergone several quarterly self-audits, EPIPs 24, 27, 33 and 56 were outdated by over a year. Since an outdated procedure could cause worse consequences than no procedure at all, DDC should consider investigating methods to strengthen the effectiveness of the self-audit system or develop another method to ensure that all emergency plan and implementing procedure changes are current in all documents. Responses to this concern will be examined in a subsequent inspection.

The inspector examined letters of agreement between the licensee and offsite support agencies and found several which were over two years old and one which was irrelevant (Mark Realty Development, Inc.). The licensee should review these documents to assure that they are current and consider the need to establish a procedure to ensure that all letters of agreement and understanding are reviewed and updated on a periodic basis, e.g. at least every two years. Responses to this concern will be examined in a subsequent inspection.

8. Exit Interview

The scope and findings of the inspection were discussed with the licensee's representatives at an exit interview conducted on May 1, 1987. The licensee's representatives attending this exit interview have been denoted in Section 1 of this report. In addition to minor concerns discussed in detail in the body of this report, the concern regarding training of the onsite STSC staff was emphasized to the licensee. The licensee stated that the inspection finding would be evaluated and prompt corrective actions, would be taken to resolve the issue.