U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report Nos. 50-528/84-57, 50-529/84-38, 50-530/84-27

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

License Nos. CPPR-141, 142, 143

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

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

Inspection at: Palo Verde Site - Wintersburg, Arizona

Inspection conducted: December 3-7 and 17-19, 1984

Inspectors: H S North 12/28/84
H. S. North, Senior Radiation Specialist — Date Signed

Approved by: G P Yuhas 12/28/84
G. P. Yuhas, Chief, Facilities Radiological Protection Section — Date Signed

Summary:

Inspection on December 3-7 and 17-19, 1984 (Report Nos. 50-528/84-57, 50-529/84-38 and 50-530/84-27)

Areas Inspected: The inspection consisted of followup on previously identified items, review of preoperational testing, tritiated water disposal, NRC Bypass Training, Title 10 requirements and facility tours.

The inspection involved 53 hours onsite by one inspector.

Results: In the 6 areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

*D. Karner, Assistant Vice President, Nuclear Production
R. Beecken, Startup Test Group Supervisor
M. Bimson, QA Engineer
*T. Bloom, Licensing Engineer
+*P. Brandjes, Unit 1 Startup Manager
+*L. Brown, Radiation Protection and Chemistry Manager
*J. Cederquist, Manager Chemical Services
+ G. Clyde, Nuclear Licensing Engineer
*R. Ferqua, Lead Startup Engineer
*J. Gross, Nuclear Construction
+*R. Hamilton, Quality Monitoring Supervisor
*T. Hillmer, Manager Radioactive Materials Control
*W. Ide, Director Corporate QA/QC
M. Lantz, Radiation Protection Support Supervisor
*J. Mann, Corporate Health Physics and Chemistry Supervisor
+ D. Mosley, Lead HVAC Startup Engineer
*R. Ozment, Startup Administrative/Technical Support Manager
*G. Perkins, Radiation Protection Supervisor
J. Rassmussen, Startup Engineer
+*C. Russo, Quality Audits and Monitoring Manager
*J. Sarver, Emergency Planning
+*J. Smith, Jr., Compliance Engineer
+ D. Stemler, Bechtel Quality Assurance
*E. Sterling, Nuclear Engineer
*I. Zeringue, Manager Technical Support

(*) Denotes attendance at the exit interview on December 7, 1984.
(+) Denotes attendance at the exit interview on December 19, 1984.

In addition the inspectors interviewed other APS and contractor technician and professional staff members.

2. Followup on Previously Identified Items

(Closed - 50-528/83-12-01): A supply of air supplied hoods was available pursuant to FSAR section 12.5.2.1.1.B.

(Closed - 50-528/83-12-21): Six, Eberline, AMS-3, continuous air monitors (CAMs), calibrated and ready to operate were available on site pursuant to FSAR 12.5.2.2.5.

(Closed - 50-528/83-12-22): Three movable air monitors, one for each unit were located in Unit 1. The monitors which sample and measure particulates, iodine and gas, are designed for connection to the computer based radiation monitoring system.

(Closed - 50-528/83-39-03): A 60 CFM breathing air (grade E) compressor was available to support the use of air supplied respirators and hoods.

The licensee was investigating the use of the instrument air system as a source of breathing air.

(Closed - 50-528/84-31-01): Primary and secondary sampling system performance and flow rates were verified by examination of test results:

91CM-1SC02 Secondary Sampling Commissioning Test
91PE-1SS01 Rev. 1 Nuclear Sampling Test

No violations or deviations were identified.

3. Preoperational Testing

Completed, approved and accepted preoperational test results were examined to assure that the test results were within the previously established acceptance criteria, that commitments specified in FSAR Section 14.2.12 Individual Test Descriptions Table 14.2-1 and Appendix 14B were satisfied and, where applicable, deviations from acceptance criteria were properly identified and disposed in accordance with the licensee's procedures. The following completed test packages were examined:

91PE-1LR01 - Liquid Radwaste Tanks and Ion Exchangers
91PE-1LR03 - LRS Concentrate Monitor Tanks
91PE-1LR04 - Chemical Drain Tanks and Pumps
91PE-1RD01 - Radioactive Waste Drain System
91CM-1SC02 - Secondary Sampling Commissioning Test
91PE-1SS01 - Nuclear Sampling Test

Heating, ventilating and air conditioning (HVAC) generic tests are fully identified below. Those generic test results examined, are identified, by number only, under the HVAC systems to which the generic tests were applicable.

Generic Tests

91GT-0XX01 - HVAC Airflow Capacity and Distribution Test
91GT-0XX02 - Air-Aerosol Mixing Uniformity Test
91GT-0XX03 - In-Place HEPA Filter Leak Test
91GT-0XX04 - In-Place Absorber Stage Leak Test
91GT-0XX06 - Duct Heater Performance Test
91GT-0XX07 - Carbon, Prefilter and HEPA Filter Installation
91GT-0XX09 - Pressure Decay Method, Filter Housing Leak Test
91GT-0XX11 - Pressure Decay Method, Mounting Frame Leak Test
91FB-0XX01 - HVAC Testing and Balancing

HVAC System Test Packages Examined

ESF Systems

91PE-1HJ01 - Control Building HVAC
91PE-1HJ02 - Control Room Pressurization
91GT-0XX01, 2, 3, 4, 6, 7, 9, 11
91FB-0XX01

91HF-1HA01 - ESF Pump Room HVAC Performance Test

91PE-1HF01 - Fuel Building HVAC
91GT-0XX01, 2, 3, 4, 6, 7, 9, 11
91FB-0XX01

Non ESF Systems

91PE-1HA01 - Auxiliary Building HVAC System
91GT-0XX01, 2, 3, 4, 6, 7, 9, 11
91FB-0XX01

91PE-1HR01 - Radwaste Building HVAC
91GT-0XX01, 2, 3, 7, 9, 11
91FB-0XX01

91HF-1HC01 - Containment HVAC Hot Functional Test
91PE-1HC02 - Containment Normal HVAC
91FB-0XX01

91PE-1CP01 - Containment Purge System
91GT-0XX01, 2, 3, 4, 7, 9, 11
91FB-0XX01

No violations or deviations were identified.

4. Tritium Evaporator

Discussions with licensee personnel established that it was the licensee's intent to discharge steam (distillate) from the boric acid evaporator to the plant vent system as a mechanism for tritium disposal. Questions raised by the inspectors included:

Effects on downstream particulate and iodine monitors?
Overall effect of such releases? (e.g. Will rainout occur?)
Have such releases been included in the ODCM calculation procedure?
Is the boric acid evaporator identified as a release point in the Technical Specifications?

At the exit interview the licensee committed to a resolution of these issues prior to operation of the boric acid evaporator in the tritium discharge mode. This matter will be examined during a subsequent inspection (50-528/84-57-01).

No violations or deviations were identified.

5. NRC Inspector Bypass Training

The inspector and the Chief, Facilities Radiological Protection Section (CFRPS) attended the NRC Inspector Bypass Training which incorporates Site Access Training (SAT) and Radiological Work Practices (RWP). Minor inconsistencies were identified in the course content. At the exit interview the licensee committed to correct the inconsistencies prior to the next course presentation.

No violations or deviations were identified.

6. Facility Tours

During the inspection of December 3-7, the inspector and the CFRPS toured the entire facility. During the tours certain concerns were identified to which the licensee responded during the December 7 exit interview or during the inspection of December 17-19, 1984.

Two welds (13-P-HRF-G01 GRN-088-N00R-HCDD-1 and HCDB) in the 2A Waste Gas Decay Tank cubical appeared to be of questionable quality. The licensee reported that the welds were in a non "Q" class system and that only visual inspection was required. A Bechtel welding engineer reexamined the welds and found them to be acceptable although of poor appearance.

Posting required by 10 CFR 20.203(e) for rooms in which licensed materials were stored appeared marginal in some cases. Regulatory requirements for posting were discussed with licensee personnel.

It was found that the only door which would provide unquestionable control of access to the space below the reactor was not equipped with a locking fixture. The licensee stated that a work order had been generated which will require installation of a lock. Lock installation and key control will be verified during a subsequent inspection (50-528/84-57-02).

No violations or deviations were identified.

7. Title 10 Requirements

The licensee had established official bulletin boards at various locations in the plant. Copies of forms NRC-3 (10 CFR 19.11(c)) were properly posted. Copies of a notice directing interested individuals to a location at which certain documents (10 CFR 19.11(b)) could be examined were posted.

Previous inspections of the licensee's SAT and RWP training programs established that 10 CFR 19.12 Instructions to workers was satisfied.

This and previous inspections and facility tours established that the licensee satisfied the requirements of 10 CFR 20.207 Storage and Control of Licensed Materials in Unrestricted Areas.

No violations or deviations were identified.

8. Exit Interview

The scope and results of the inspection were discussed with the individuals denoted in paragraph 1 at the conclusion of the inspection on December 7 and 19, 1984. The concerns discussed in paragraphs 4, 5 and 6 were identified and discussed with the licensee. The licensee was informed that no violations or deviations were identified.

The licensee made two commitments during the exit interview:

First, to evaluate the inspectors' concerns related to operation of the boric acid evaporator in the tritium disposal mode prior to using the evaporator in that mode, and;

Second, to install a locking device on the reactor cavity access door.