

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-530/85-20
Docket No. 50-530
Construction Permit No. CPPR-143
Licensee: Arizona Nuclear Power Project
P. O. Box 52034
Phoenix, Arizona 85072-2034
Facility Name: Palo Verde Nuclear Generating Station - Unit 3
Inspection at: Palo Verde Site, Wintersburg, Arizona
Inspection conducted: July 29 - August 2 and August 12-16, 1985

Inspector: Talbert Young Jr. for 8-28-85
W. J. Wagner, Reactor Inspector Date Signed

Approved By: Talbert Young Jr. 8-28-85
T. Young, Jr., Chief Date Signed
Engineering Section

Talbert Young Jr. for 8-28-85
L. F. Miller, Jr., Chief Date Signed
Reactor Projects Section 2

Summary:

Inspection on July 29 - August 2 and August 12-16, 1985
(Report No. 50-530/85-20)

Areas Inspected: Routine unannounced inspection by a regional based inspector of activities associated with instrument components and systems. The inspection involved 75 inspector-hours by one NRC inspector. During this inspection, Inspection Procedure 52053 was covered.

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

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DETAILS

1. Persons Contacted

a. Arizona Nuclear Power Project (ANPP)

*D. B. Karner, Assistant Vice President, Nuclear Production
*W. E. Ide, Director, Corporate QA/QC
*C. N. Russo, Manager, Quality Audits and Monitoring
*S. G. Penick, Quality Monitoring Supervisor
*R. M. Butlar, Director, Technical Services
*J. R. Bynum, Plant Manager
J. D. Bayless, Quality Assurance Engineer
W. Montefour, Quality Assurance Engineer

b. Bechtel Power Corporation (Bechtel)

*G. A. Hierzer, Field Construction Manager
*T. L. Horst, Project Field Engineer
*H. A. Mear, Assistant Project QC Engineer
*R. E. Vote, Assistant Project QA Manager
K. N. Bethell, Instrument Area Field Engineer
R. L. Treaster, Shipping and Receiving Supervisor
L. R. Eton, Calibration Lab Engineer
J. Yoshida, Mechanical Engineer
R. Kumbla, Lead Field Engineer
T. Weber, Lead Mechanical Engineer

*Denotes those attending the exit interview on August 15, 1985.

2. Instrument Components and Systems - Work Observation

a. Receiving Inspection

No safety-related instrument components were received during this inspection. The inspector conducted a detailed inspection of receiving and storage activities during March 1981; this is documented in NRC Report Nos. 50-529/85-13 and 50-530/85-06. To assure that the administrative controls were currently being affectively implemented the inspector observed receiving inspection activities. Components were being properly identified, nonconforming components controlled, and an adequate number of qualified personnel were available to perform the receiving inspection function. The inspector reviewed the quality records for evidence that receiving inspection was performed for the installed instrument components identified in Section 2.c of this report. The following Material Receiving Reports (MRRs) were reviewed.

<u>MRR No.</u>	<u>Instrument Component</u>
183566	LT-1124B
161785	PT-352C
166567	Instrument Racks SBA-A01 and SBB-A01
168416	Instrument Racks SBC-A01 and SBD-A01

Receiving inspections was performed for damage, storage classification, identification and marking, and documents received. A nonconformance report was written on MRRs 116567 and 168416 (NCR No. 1203) for documentation not received. This NCR was subsequently closed upon receipt of the documentation.

b. Storage

None of the type of instrumentation selected for this inspection were located in storage. However, observation and evaluation of storage activities for other safety-related instrument components revealed the following:

- (1) Instruments are stored in proper storage level designations.
- (2) Components are properly identified.
- (3) Storage conditions (temperature, humidity, cleanliness, etc.) are controlled and monitored.
- (4) Nonconforming items are identified and segregated.
- (5) An adequate number of qualified personnel are available to perform the required storage function.

c. Completed Work

The following installed instruments were selected for inspection:

<u>Instrument System</u>	<u>Transmitter Number</u>	<u>Description</u>	<u>Channel</u>
Reactor Trip (SCRAM) Initiation	J-RCA-PT-101A	Pressurizer	A
	J-RCB-PT-101B	Pressure	B
	J-RCA-PT-102A		A
	J-RCD-PT-102D		D
	J-RCD-PT-101D		D
Engineered Safety Features Actuation	J-HCA-PT-352A	Containment	A
	J-HCB-PT-352B	Pressure	B
	J-HCC-PT-352C		C
	J-HCD-PT-352D		D
Display Instrumentation	J-SGB-LT-1124B	Steam Generator No.2 Level	B

The location, configuration and installation of these instruments were in accordance with the following approved design drawings utilized during this inspection:

<u>Combustion Engineering Drawing No.</u>	<u>Revision No.</u>	<u>Title</u>
E-14272-510-006	3	Transmitter Configuration for Mounting Bracket
E-14273-510-011	5	Instrument Rack Assembly and Details
 <u>Bechtel Drawing No.</u>		
13-J-ZZS-167	6	Instrument Mounting Assembly Rosemount Transmitter
13-J-01D-105	5	Auxiliary Building Isometric
13-J-01D-106	4	Sensing Lines
13-J-03D-117	5	Containment Building
13-J-01D-133	4	Isometric Sensing
13-J-01D-138	4	Lines
13-J-01D-140	4	
13-J-01D-116	4	
13-J-01D-103	3	Auxiliary Building
13-J-01D-104	3	Isometric Sensing Lines
13-J-ZAF-013	6	Auxiliary Building
13-J-ZAF-013	5	Instrument Location Plan
13-J-ZCF-004	8	Containment Building
13-J-ZCF-007	6	Instrument Location Plan
13-J-ZCF-008	7	

Inspection of the installed instruments revealed the following:

- (1) All instruments were as specified on the design drawings.
- (2) Instruments were correctly and permanently identified.
- (3) Instruments were not exposed to potential hazards such as high pressure piping or flammable material.
- (4) Physical and electrical independence between redundant parts were properly maintained.

Two of the instruments selected for this inspection were recently removed. Pressure transmitter number RCA-PT-101A was removed for rework in accordance with NCR No. JC-1065. Review of this NCR

revealed that the instrument was returned to the vendor for recertification in response to a 10 CFR Part 21 report. Pressure transmitter RCD-PT-101D was removed as a result of a Material Change Notice (MCN) No. 60196-J. The MCN is the controlling mechanism utilized to transfer material and equipment from one unit to another. In this instance MCN-60196-J was issued to obtain a replacement pressure transmitter from Unit 3 for use in Unit 2.

d. Construction Testing and Calibration

This activity is no longer being performed by construction. All testing and calibration activities are done by the startup group.

e. Instrument Air System

The instrument air system is not safety-related; however, it is important to safety because instrument air is used for safety-related control components. The major component of the instrument air system selected for inspection was an air compressor identified as IAN-COIC, R2T. The inspector utilized the following design/installation drawings to verify proper location and installation of the air compressor:

- (1) Drawing No. 13-M-IAP-001 Revision 13, "P&ID Diagram Instrument and Service Air System"
- (2) Drawing No. 13-P-ZTL-401 Revision 5, "Equipment Locations Turbine Building Plan"
- (3) Drawing No. 13-C-ZTS-101 Revision 22, "Turbine Building Foundation Mat Plan Area TIA, B&C"

The inspector observed that the air compressor was correctly and permanently identified. In addition, the inspector was able to verify correct location and configuration of the air compressor, including anchor bolt locations, by performing physical measurements within the Turbine Building. The air compressor was correctly and permanently identified.

The inspector reviewed the inspection reports, called CIPs (Construction Inspection Planning) associated with installation of the air compressor. The CIP of May 21, 1981, was for inspection of equipment installation which covered installation of anchor bolts, and equipment location and orientation. Angular alignment and offset (parallel) alignment was performed and documented on CIP of August 25, 1981. An additional CIP was initiated on May 17, 1984, for equipment inspection as a result of internal corrosion being discovered in the Unit 2 air compressors. CIP No. 156.0-301 was written for inspection of Unit 3 air compressors for evidence of corrosion; no corrosion was discovered.

In addition to the above equipment inspection, the inspector performed a walkdown inspection of approximately 45 feet of instrument air tubing. This activity was conducted from header

(Root) valve V-872 to safety-related valves UY648 (Solenoid) and UV648 (Control) located in the safety injection system. The following drawings and specifications were utilized for verification of the valves and associated air lines:

- (4) Drawing No. 13-M-SIP-002 Revision 11, "Safety Injection and Shutdown Cooling System"
- (5) Drawing No. 13-P-SIF-103 Revision 17, "Containment Building Isometric-Safety Injection System"
- (6) Drawing No. 13-P-IAF-177 Revision 2, "Containment Building Isometric-Service Air System Instrument Air"
- (7) Drawing No. 13-J-100.099 Revision 7, "Instrument Installation Notes - Pneumatic"
- (8) Drawing No. 13-J-ZZS-092 Revision 10, "Instruments and Controls, General Installation Notes"
- (9) Specification No. 13-JM-702 Revision 7, "Installation Specification for Instrumentation and Controls"

Instrument air tubing is field routed which means that the tubing is installed from support to support at the discretion of the field engineer as long as the installation is in accordance with the requirements contained in the above drawings and specifications. Attributes verified were minimum length of the unistrut supports, embedment length, minimum weld length, and where applicable, the anchor bolt spacing distance. The safety-related valves were correctly identified and located in accordance with the construction drawings.

No violations of NRC requirements or deviations were identified.

3. Exit Meeting

The inspector met with licensee management representatives denoted in paragraph 1 on August 15, 1985. The scope of the inspection and the inspector's findings as noted in this report were discussed.