U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-530/82-09

Docket No. 50-530 License No. CPPR-143 Safeguards Group

Licensee: Arizona Public Service Company

P. O. Box 21666

Phoenix, Arizona 85036

Facility Name: Palo Verde Nuclear Generating Station - Unit No. 3

Inspection at: Palo Verde Construction Site, Wintersburg, Arizona

Inspection conducted: August 2-6, 1982

Inspectors: for 8/17/82
G. Hernandez, Reactor Inspector Date Signed

Date Signed

Approved by: Aug. 17, 1982
G. B. Zwetzig, Chief Date Signed
Engineering Programs Section

Summary:

Inspection on August 2-6, 1982 (Report No. 50-530/82-09)

Areas Inspected: Routine, unannounced inspection by a regional based inspector of licensee activities associated with Unit No. 3, including dome liner plate welding and safety related pipe support and restraint systems. The inspection involved 30 inspection-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

   a. Arizona Public Service Company (APS)

   *E. E. Van Brunt, Jr., Vice President, Nuclear Projects Management
   *J. A. Roedel, Corporate Quality Assurance Manager
   D. B. Fasnacht, Nuclear Construction Manager
   *W. E. Ide, Construction Quality Assurance/Quality Control Manager
   D. Wittas, QA Engineer
   P. Moore, QA Engineer
   S. Penick, QA Engineer
   *R. J. Kimmel, Field Engineering Supervisor

   b. Bechtel Power Corporation (Bechtel)

   S. M. Nickell, Project Superintendent
   *D. R. Hawkinson, Project QA Supervisor
   R. M. Grant, Project QC Engineer
   M. A. Rosen, QC Supervisor
   J. F. White, Senior Quality Control Engineer
   J. D. Johnson, Unit Lead Field Welding Engineer
   J. Donaldson, Field Welding Engineer

   *Denotes personnel present at the management meeting on August 6, 1982. Also, in attendance was Mr. L. E. Vorderbrueggen, the NRC Senior Resident Inspector.

2. Tour of Unit No. 3

   The inspector conducted a tour of Unit No. 3 to assess construction progress, techniques, and general compliance with site specifications, procedures, and regulatory requirements. Particular areas inspected included the Unit No. 3 Auxiliary, Control, Diesel, and Containment Buildings.

   No items of noncompliance or deviations were identified.

3. Dome Liner Plate Welding - Unit 3

   a. Observation of Work and Work Activities

   In-process welding of the dome liner was examined for compliance with the applicable construction specifications and work plan procedures/quality control instructions. Particular attributes examined included fit-up, tacking, in-process welding, removal of temporary attachments, and completed weld seams.

During this examination the inspector observed a boilermaker on the southside of the dome removing temporary attachments by knocking them off with a hammer. These attachments are lugs or clips used in conjunction with steel pins for bringing the dome liner plate within fit-up/alignment tolerances. Discussions with the licensee indicated that this practice is allowed by the construction specification. A review of Construction Specification No. 13-CM-370 indicated that one of the permitted methods for removing temporary attachments is by chipping or breaking. In addition, the specification provides that any remaining weld stub (after breaking) shall be removed flush with the surface to assure a smooth contour with the metal surface. While the licensee agrees that knocking off temporary attachments with a hammer is not good practice (because of the possibility of damage to the 1/4" liner plate) the licensee believes he acted within the guidelines of his specification. Nevertheless, the licensee on August 4, 1982, reinstructed all boilermakers working on the dome on the proper method of removing construction aids. The boilermakers were instructed to grind or gouge the weld (to reduce the strength of the weld) then to knock off the construction aid. The licensee also agreed to review the specification to assure that appropriate and proper instructions were delineated in the specification to minimize damage to the liner plate.

The licensee's actions with respect to this item will be examined during a future NRC inspection. This is a followup item. (Followup Item: 50-530/82-09/01).

b. Review of Quality Records

The welder qualification records for the twelve welders working on the containment dome liner plate were examined for compliance with the applicable specifications, procedures, codes and standards.

No items of noncompliance or deviations were identified.

4. Safety Related Pipe-Support and Restraint Systems

a. Review of Quality Assurance Implementing Procedures

The following pipe support and restraint documents were reviewed for conformance to licensee commitments and ASME Section III, Subsection NF requirements:

(1) Specification 13-PM-209, Rev. 3, "Specification for Nuclear Pipe Supports."

(2) Specification 13-PM-209, Section 4, Rev. 7 of 3/31/80, "Technical Requirements Design Specification for Nuclear Pipe Supports."

(3) WPP/QCI-201.1, Rev. 12 of 6/2/81, "Nuclear Pipe Hangers and Supports Installation."

These procedures incorporate satisfactory controls to assure that the type and classification of the components comply with approved drawings; location and spacing meet code requirements; impact properties are not affected by fabrication processes; bolts and nuts are of proper size and secure; snubbers and restraints are inspected for "freeze-up" and deformation prior to installation; and that only reviewed and approved welding and associated procedures pertaining to safety-related pipe supports and restraint systems are used.

No items of noncompliance or deviations were identified.

b. Observation of Work and Work Activities - Unit 3

The following safety related pipe supports were examined for compliance to the above specifications, procedures and code requirements:

	System	Pipe Support No.
(1)	Essential Water	3-EW-023-H008
(2)	Fuel Pool Cooling and Cleanup	3-PC-022-H001
(3)	Fuel Pool Cooling and Cleanup	3-PC-022-H002
(4)	Fuel Pool Cooling and Cleanup	3-PC-022-H011
(5)	Fuel Pool Cooling and Cleanup	3-PC-022-H013
(6)	Safety Injection	3-SI-119-H002
(7)	Safety Injection	3-SI-119-H003
(8)	Safety Injection	3-SI-119-H004
(9)	Safety Injection	3-SI-307-H008
(10)	Safety Injection	3-SI-194-H003
(11)	Chemical and Volume Control	3-CH-284-H002
(12)	Chemical and Volume Control	3-CH-284-H003
(13)	Chemical and Volume Control	3-CH-284-H004
(14)	Chemical and Volume Control	3-CH-284-H009
(15)	Chemical and Volume Control	3-CH-284-H010
(16)	Chemical and Volume Control	3-CH-284-H015

During the examination of the above supports the inspector noted the following:

(1) Pipe Support No. 3-PC-022-H001: Visual examination of the three tack welds connecting a tube steel support member to an end plate (dust cover) revealed one tack weld on the right side (looking south) that was cracked. The licensee

took immediate action and issued Nonconformance Report No. PA-4363 to provide corrective action. Since the tack welds provide no structural purpose for the support, the inspector has no further questions on this matter.

(2) Flare bevel welds: During the inspection of the above pipe supports, the inspector noted that in some instances a weld size was called out on the drawing for flare bevel welds. Flare bevel welds in this case are specified for field welding of tube steel support members to floor embed plates. Discussions with cognizant engineers indicated that Bechtel Drawing No. 13-S-ZAS-519 Revision 3, "Miscellaneous Steel Weld Symbol Interpretation" issued on 12/14/79, details the minimum requirements for flare bevel welds. The minimum requirements as stated require that the height of the weld should be greater than or equal to the wall thickness of the tube steel, unless the weld size is called out in the drawing.

The inspector questioned whether a quality control inspector could actually measure and verify a flare bevel weld size as called out on the pipe support drawing, and whether the effective throat of the weld was achieved using the criteria stated in Bechtel drawing no. 13-S-ZAS-519. The licensee stated that they would investigate and take appropriate action as necessary on this subject.

This matter is considered unresolved and will be examined further during a future NRC inspection. (Unresolved Item: 50-530/82-09/02).

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. One unresolved item was identified during this inspection and is discussed in Paragraph 4.

6. Management Meeting

On August 6, 1982, the inspector met with the licensee representative identified in paragraph 1 and summarized the scope of the inspection activities and reviewed the inspection findings, as described in this report.