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

REGION V

Report No. 50-528/80-15
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Docket No. 50-528/529/530 License No. CPPR-141,-142,-143 Safeguards Group _____

Licensee: Arizona Public Service Company

P. O. Box 21666

Phoenix, Arizona 85036

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

Inspection at: Palo Verde Construction Site, Wintersburg, Arizona

Inspection conducted: September 9-12, 1980

Inspectors: J. H. Eckhardt, Reactor Inspector — 10/29/80 Date Signed

G. Hernandez, Reactor Inspector — 10/29/80 Date Signed

A. J. D'Angelo, Reactor Inspector (training status)

Approved By: R. C. Haynes, Section Chief, Reactor Projects
Reactor Construction and Engineering Support Branch — 10/29/80 Date Signed

Summary:

Inspection on September 9-12, 1980 (Report Nos. 50-528/80-15, 50-529/80-15, and 50-530/80-15).

Areas Inspected: Routine, unannounced inspection by regional based inspectors of activities relating to licensee action on previous inspection findings and Part 21 reports, installation of pipe supports and restraints, installation and records review of containment liner, and observation of cadwelding activities. The inspection involved 52 inspection-hours onsite by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

RV Form 219 (2)

DETAILS

1. Persons Contacted

a. Arizona Public Service Company (APS)

*E. E. Van Brunt, Jr., Vice President, Nuclear Projects
*G. Carl Andognini, Vice President, Plant Operations
*L. K. Mundth, Vice President, Electrical Operations
*A. C. Rogers, Nuclear Engineering Manager
*J. M. Allen, Nuclear Engineering Manager
*W. E. Ide, Site QA Supervisor
*D. B. Fasnacht, Site Construction Manager
G. Pankonin, QA Engineer
R. D. Forrester, QA Engineer
L. Souza, QA Engineer
D. E. Fowler, QA Engineer

b. Bechtel Power Corporation (Bechtel)

*W. J. Stubblefield, Field Construction Manager
*W. H. Wilson, Project Manager
*A. K. Priest, Project Field Engineer
*R. M. Grant, Project QC Supervisor
*J. E. Pfunder, Project QA Engineer
D. R. Hawkinson, Project QA Supervisor
W. S. Cummings, Lead Discipline Engineer (Instrumentation)
M. Patterson, Lead Discipline Field Engineer (Pipe Supports)
S. Chavey, Instrumentation Field Engineer
J. Robinson, Lead Discipline Field Engineer (Electrical)

* Denotes those attending exit interview.

2. Plant Tour

During a general facility tour on September 9, 1980 the inspectors observed a craftsman deviating from procedural requirements wherein two horizontal cadwelds on the northside of Unit 3 containment were assembled and pinned before marking the bar ends. Bechtel procedure WPP/QCI No. 56.0, "Cadweld Splicing of Reinforcing Steel," states that, "Prior to assembling the cadweld sleeve into position on the rebar ends, the bar ends shall be marked." The craftsman indicated that he could verify that the sleeve was properly centered by viewing the bar ends through the tap hole. Licensee representatives later informed the inspector that the two cadwelds in question were disassembled and then reassembled according to procedure and that the craftsman was reinstructed on the procedural requirement and need to rigorously follow the procedure.

On September 11, 1980 the inspector observed four cadwelding crews on the southside of Unit 3 containment and all cadwelding crews appeared knowledgeable and well-trained on cadwelding procedures. Based on these observations, the initial incident with the two cadwelds is considered an isolated occurrence and the inspector has no further questions.

3. Licensee Action on Previous Inspection Findings

a. (Closed) Followup Item (50-528/80-12/01): Tension Measurements During Cable Pulling.

PCN No. 30 has been issued to clarify WPP/QCI 254.0, "Cable Installation." The change notice requires the pulling crew to monitor the cable during pulling to ensure that the pulling tension is not increased due to binding of the cable, and to record cable tension and generate a NCR if cable binding results in cable pull tension exceeding the specified maximum force.

This item is considered closed.

b. (Open) Followup Item (50-528/80-12/02): Measurement and Test Equipment Calibration Records.

The calibration control log cards for 21 pieces of measuring and test equipment were reviewed and compared with the requirements of WPP/QCI 7.0, Rev. 12, "Calibration and Control of Construction Measuring and Test Equipment." Included in the review were control log cards for five sling psychrometers. The control log cards for four of these instruments indicated a calibration interval of one year, whereas the calibration interval list in WPP/QCI 7.0 indicated an interval of 6 months. The inspector noted that the control log cards indicated that these instruments were "not for acceptance testing." In addition, review of the control log card for dry film gauge JOA0099 indicated the gauge was overdue for calibration check and was also not listed on the latest recall list. The person in custody of this gauge was interviewed and indicated that the gauge was only used in the water reclamation area and not on safety related components. Also, the gauge did not have a calibration sticker attached to it so that the custodian of the gauge did not know when it was due for a calibration check.

These additional administrative problems were discussed with the licensee who indicated an extensive audit of this area was scheduled in the near future.

This item will remain open pending future inspection.

4. Licensee Action on Part 21 Reports

The licensee's action and status concerning the following 10 CFR Part 21 reports was reviewed. No items of noncompliance were identified.

a. Defective pressure switch in chlorine monitoring equipment (MDA Scientific, Incorporated). The licensee notified the regional office on June 4, 1980 concerning this problem and stated that a 50.55(e) report would be submitted. A final written report was submitted on July 3, 1980. The corrective action includes a commitment by MDA Scientific to provide Palo Verde with alternate pressure switches after approval/qualification so that Bechtel can modify the equipment. This problem is being controlled via Bechtel's normal NCR system.

b Lack of protection for containment gas analysis system pump in the event of inadvertent closure of the outlet valve (Comsip, Incorporated). The regional office was notified by the licensee on June 12, 1980 of this condition. A final 50.55(e) report was submitted on July 9, 1980. Comsip will supply modification kits and Bechtel will modify the units. The work will be controlled via a design change package.

c Borg-Warner valve stem extension loosening problem. The licensee notified the regional office on July 22, 1980 stating that a 50.55(e) report would be written concerning this problem. A final report was submitted on July 29, 1980. Borg-Warner will supply Combustion Engineering with instructions and parts for the valves. Bechtel will then modify the valves. The problem is being controlled via Bechtel's NCR system.

d Potential failure of temperature detection controllers on carbon filter system (CTI Nuclear). The licensee indicated that a 50.55(e) report would be submitted concerning this item.

e Failure of Borg-Warner gate valve to fully close. The licensee indicated that this item would also be handled via the 50.55(e) system.

f Motor shaft failure of gas monitoring system pump (Comsip, Incorporated). This item will also be reported via 50.55(e).

5. Installation of Pipe Supports and Restraints

Piping supports and restraints were examined to ascertain compliance with WPP/QCI-201.1, "Nuclear Pipe Hangers and Supports Installation," Specification 13-PM-209, "Nuclear Pipe Supports," and the applicable support drawings. The examination included the following supports in Unit 1 and 2 auxiliary buildings:

Support	ASME Q Class	Type
Unit 1		
1AF006H002	2	sway strut
1AF006H004	2	spring
1AF027H004	3	spring
1CH003H037	2	restraint
1CH003H067	2	combination
1CH142H003	2	snubber
1CH149H003	2	snubber
1EW005H002	3	snubber
1NC081H005	3	combination
1RC068H005	1	hanger
1SI002H002	2	snubber
1SI008H005	2	combination
1SI072H009	2	spring
1SI099H002	2	snubber
1SI114H016	2	spring
Unit 2		
2EC069H009	3	combination
2EW056H010	3	sway strut
2EW056H011	3	spring
2SI067H002	2	hanger
2SI087H001	2	combination
2SI087H003	2	sway strut
2SI100H038	2	restraint
2SI119H007	2	spring
2SI308H015	2	spring

All of these supports had been completed with the exception of the snubber type which were partially completed and inspected (the snubbers were not yet installed).

Particular attributes checked included configuration, welding, preservation, bolting, bleed holes, and spring setting, where applicable. No problems were identified except for:

(1) Pipe support 1SI008H005 required a bar plate attached to a flange with a 5/16 inch fillet weld on three sides. Approximately 2 inches of the 10 inches of weld was slightly undersized from 1/32 to 1/64 inches. A nonconformance report was written on September 15, 1980 to ensure corrective action is taken.

(2) A sway strut end bracket for pipe support 1AF006H002 was welded to a support beam on the sides of the bracket instead of the top and bottom of the bracket as required by the drawing. This actually resulted in a longer weld length than specified due to the sides of the bracket being longer than the top and bottom of the bracket. A NCR was written on September 12, 1980 to document this condition. The recommended disposition was to accept the welding "as is" based on the fillet weld size being the same as the drawing requirement and the length being greater than the drawing requirement.

Both of the conditions are considered to be isolated cases. The inspector had no further questions in this area.

6. Steel Structures and Supports

a. Visual Examination of Welds

- Completed field welds in steel structures and supports for Unit 2 and 3 were examined to determine whether the welds met the specified visual standards established by the licensee's procedures, specifications and the code requirements.

- Unit 2 - The inspector examined work-in-progress and completed weld seams on the containment dome liner plate to verify that the work was in accordance with the welding procedures specified, P1-A-Lh and P1-F. Specific attributes examined on completed weld seams included weld surface finish and appearance, weld reinforcement, joint configuration, removal of temporary attachments, arc strikes and weld spatter. The weld seams conformed to the code and the licensee's visual acceptance criteria.

  Fitup and welding activities associated with the 12 seams in the area of the dollar plate were also examined. The inspector's observations included verifying that no excessive forces were being utilized or the materials stressed beyond the limitations specified in Specification 13-CM-370.

- Unit 3 - Eight completed field welds were selected for examination, three beam clip support welds in the Auxiliary Building and five containment liner plate weld seams. The clip welds in the Auxiliary Building are located at the 58' elevation between AH and AJ lines and north of A7 line. The containment liner plate weld seams examined were: 3-H4-2, 3-4V-1, 3-5V-2, 3-H4-5 and 3-4V-4.

- No items of noncompliance or deviations from licensee procedures or code requirements were identified during examination of the above welds.

b. Review of Quality Records

The quality records for the eight vertical and horizontal Unit 3 containment liner plate weld seams examined during the NRC inspection of April 15-18, 1980 (NRC Inspection Report No. 80-06) were reviewed. The records included welder qualification, QC inspector qualifications, weld maps and NDE reports.

The records were examined for compliance with licensee procedures and code requirements.

No item of noncompliance or deviations were identified.

c. Welder Qualification

The licensee's system for welder qualification was examined for compliance with the requirements of the PSAR, pertinent sections of the ASME code and the governing licensee procedures. The examination included a review of procedures for qualifying welders and welding operators and for maintaining records of qualification status. The performance qualification test records for ten welders involved in the welding of the Unit 2 and 3 containment liner plate were also examined.

No items of noncompliance or deviations were identified.

d. Welding Material Control

The inspector examined the licensee's control of welding material at the warehouse and in containments 2 and 3. The examination also entailed a review of procedures applied to the purchase, receiving, storage, distribution and handling of welding material. The inspector also sampled two purchase orders for weld filler material and receiving records to determine whether these activities were conducted in accordance with the licensee's procedures and instructions.

No items of noncompliance or deviations were identified.

7. Exit Interview

On September 12, 1980, the inspectors met with licensee representatives identified in Paragraph 1 and summarized the scope and findings of the inspection as noted in this report.