

APPENDIX A

U. S. NUCLEAR REGULATORY COMMISSION  
REGION V

NRC Inspection Report: 50-528/84-20  
50-529/84-15  
50-530/84-09

Construction Permits: CPPR 141  
CPPR 142  
CPPR 143

Dockets: 50-528  
50-529  
50-530

Licensee: Arizona Public Service Company  
P. O. Box 21666  
Phoenix, Arizona 85036

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

Inspection At: Arizona Public Service Company, Phoenix, Arizona, and  
PVNGS Site, Wintersburg, Arizona

Inspection Conducted: April 23-27, 1984

Inspectors:

*L. E. Ellershaw* 6-14-84  
L. E. Ellershaw, Reactive Inspection Section (RIS), Date  
Vendor Program Branch (VPB)

*J. Barnes* 6-14-84  
for J. T. Conway, RIS, VPB Date

Approved:

*T. Young Jr.* 6-18-84  
T. Young, Chief, Reactor Project Section 2 Date

*J. Barnes* 6-14-84  
I. Barnes, Chief, RIS, VPB Date

Inspection Summary

Inspection Conducted April 23-27, 1984 (Report 50-528/84-20)

Areas Inspected: Nonroutine, unannounced inspection of receiving inspection and procurement document control. The inspection involved 16 inspector-hours onsite and 6 inspector-hours at the Phoenix office by two NRC inspectors.

Results: Within the two areas inspected, no violations or deviations were identified.

Inspection Conducted April 23-27, 1984 (Report 50-529/84-15)

Areas Inspected: Nonroutine, unannounced inspection of receiving inspection and procurement document control. The inspection involved 16 inspector-hours onsite and 5 inspector-hours at the Phoenix office by two NRC inspectors.

Results: Within the two areas inspected, no violations or deviations were identified.

Inspection Conducted April 23-27, 1984 (Report 50-530/84-09)

Areas Inspected: Nonroutine, unannounced inspection of receiving inspection and procurement document control. The inspection involved 16 inspector-hours onsite and 5 inspector-hours at the Phoenix office by two NRC inspectors.

Results: Within the two areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

- \*E. E. Van Brunt, Jr., Vice President, Nuclear
- \*W. E. Ide, Corporate Quality Assurance (QA)/Quality Control (QC) Manager
- \*B. S. Kaplan, Quality System and Project Manager
- \*D. Fowler, Construction QA/QC Manager
- \*D. B. Fasnacht, Nuclear Construction Manager
- R. Opsahl, Receiving QC Engineer
- J. Cook, QA Engineer
- M. A. Rosen, Assistant QC Engineer
- H. Mear Assistant QC Engineer
- G. Dassow, Project Field Procurement Manager
- \*D. Hawkinson, Bechtel Power Corporation (BPC) Project QA Manager
- \*P. R. Huber, BPC Project Quality Coordinator
- \*H. D. Foster, BPC Project QC Engineer

\*Denotes those attending the exit interview.

2. Receiving Inspection

The NRC inspectors reviewed the receiving inspection commitments contained in: (a) Sections 17.1A.7 and 17.1B.7 in Chapter 17 of the PVNGS Final Safety Analysis Report (FSAR), Amendment 12; and (b) Procedure No. 4.0, Revision 22, "Receiving Inspection." Documentation packages applicable to 19 purchase orders (POs) were examined to verify that required vendor documentation submittals were complete and that receiving inspections had been performed to assure compliance of received items with PO requirements. The qualification and training records of five BPC inspectors who had performed receipt inspections on the ASME Section III and "Q" listed material on the following POs were reviewed to assure that personnel performing and verifying activities affecting quality were trained and qualified. The documentation packages consist of field material requisitions (FMRs), material receiving reports (MRRs) generated by either Arizona Public Service (APS) or BPC, and either Certified Material Test Reports (CMTRs) or Certificates of Conformance (CC) supplied by the vendors.

a. Fastener Materials from Cardinal Industrial Products Corporation (CIPC)

- (1) APS placed PO No. 140441 dated December 14, 1981, with CIPC for 28 - 1½" bolts of SA-325 material to be used in the Unit 2 in-core instrumentation guide tube supports. The shipping notice stated that these items were shipped from Ly, New York, to the PVNGS site, which would indicate that CIPC was acting as a material supplier. However, the only available CMTR was from CIPC.

Subsequently, BPC scrapped these bolts because CIPC's CMTR did not provide charpy V-notch (CVN) impact test results and it could not be verified that CVN impact tests had been performed.

- (2) APS placed PO No. 161717 dated October 7, 1983, with CIPC for 12 - 2" heavy hex nuts of SA-194 material manufactured to ASME Code Section III, Class 1 requirements. This PO was generated based on information contained in FMR No. 10407, which described the nuts as being 2", SA-194 heavy hex nuts, to be used in the steam generator manway cover in Unit No. 3. It was noted, however, that both the FMR and PO were incorrect with respect to the nut size, in that the applicable Combustion Engineering, Inc., (CE) drawing required a 1½" heavy hex nut.

CIPC furnished the 12 - 2" heavy hex nuts with CMTR No. 34508 dated October 17, 1983. The CMTR certified that the nuts were manufactured in accordance with ASME Code, Section III, Class 1 requirements. However, a prior NRC inspection at CIPC revealed that CIPC purchased these nuts as stock material in a finished condition in December 1982, from Unytite Fastener Manufacturing without imposing ASME Code or quality program requirements. There was no documentation available to indicate that the material had been upgraded by CIPC in accordance with ASME Code Section III, NCA-3867.4(e) requirements. It was verified by the NRC inspector that the 12 - 2" nuts were in storage at the PVNGS site warehouse. Documentation had not been initiated to disposition the oversized nuts.

- (3) APS placed PO No. 158136 dated August 22, 1983, with CIPC for studs and nuts in accordance with Section III, Class 1 requirements. The CIPC CC accompanying the received material was not stamped by either the BPC inspector or the Authorized Nuclear Inspector as required by the receipt inspection procedure. Upon notification of the deficiency, BPC generated Nonconformance Report No. PX-8356 and took corrective action; i.e., reviewed 192 MRRs to assure that the reports had been reviewed and stamped off. This review was accomplished prior to the completion of the NRC inspection to assure that the noted deficiency was an isolated case.
- (4) APS placed PO No. 161435 dated September 22, 1983, with CIPC for 20 - 1½" nuts to SA-194, Section III, Class 1 requirements to be used for the in-core instrumentation guide tube supports for Unit No. 3. CIPC's CMTR No. 34265 dated October 7, 1983, certified that the nuts were manufactured in accordance with Section III, Class 1, Subsection NB requirements. However, a prior NRC inspection at CIPC revealed that CIPC purchased these nuts as stock material in a finished condition in October 1981

from Osaka Bolt and Screw Company, Ltd. There was no documentation available to indicate that the material had been upgraded by CIPC in accordance with Section III, NCA-3867.4(e) requirements.

- b. Reinforcing/Structural Steel from Marathon Steel Company - A review of four documentation packages applicable to POs placed with Marathon Steel Company for quality class "Q" material revealed no discrepancies.
- c. Fittings and Flanges - A review of five documentation packages associated with POs placed with both Guyon Alloys, Inc., and Liberty Equipment and Supply Company revealed no discrepancies.
- d. Fastener Materials from other Vendors - A review of six documentation packages associated with POs placed with Lone Star Screw Company, Southern Bolt and Fastener Corporation; Texas Bolt and Screw Company; and The Pipe Machinery Company (PMC), for ASME Code Section III, Class 1 and 2 applications, revealed the following:

- (1) Combustion Engineering, Inc. (CE), the nuclear steam supply system supplier, had within the scope of its supply the responsibility for the procurement and supply of primary and secondary manway studs and nuts. CE purchased the studs and nuts from PMC.

CE's POs to PMC ordered 80 primary manway studs, 64 secondary manway studs, and 144 nuts. Subsequently, these items were supplied to CE Chattanooga and incorporated into the Unit No. 2 steam generator assemblies. CE's PO invoked the ASME Code and their specifications POH-16(h) and POH-19(a) with various addenda for the studs and nuts, respectively.

The two steam generator assemblies for Unit No. 2 (Serial Nos. 7293-1 and 2) were released by CE on October 8, 1979. The final acceptance for both steam generator assemblies was noted on BPC's Receiving Inspection Planning for Permanent Plant Items forms, as being July 29, 1980, with the "completed package reviewed and accepted" block signed off.

The 80 primary manway studs and 64 secondary manway studs for the Unit No. 2 steam generators were subsequently replaced due to dimensional problems. New studs were ordered and subsequently received and accepted by BPC on Receiving Inspection Planning for Permanent Plant Items form dated September 7, 1983.

- (2) Section 17.1A.7 in APS's FSAR states, in part: "Items that have been source inspected are examined, upon receipt, for shipping damage, correctness of identification and proper quality documentation . . . Documentary evidence showing that Q-list

items or materials conform to procurement requirements shall be available at the site prior to installation . . . Documentary evidence is sufficient to identify the specific requirements, such as codes, standards, and specifications met by the procured item. This requirement can be satisfied by having available at the site, copies of the purchase specification, purchase order and any changes, and written certification of conformance to procurement requirements. These documents shall be maintained by the Project Field Quality Control Engineer. Bechtel QA shall verify by audit the validity of the certifications of conformance."

While acceptance of the primary and secondary manway studs and nuts was based on examination for shipping damage and correctness of identification, proper quality documentation could not be ascertained due to BPC's failure to have available at the site copies of the CE purchase specifications, POs, and any changes. While it appears that the studs and nuts comply with ASME Code requirements, they may not be in compliance with the CE specifications.

This item is considered an unresolved item (50-528/8420-01; 50-529/8415-01, and 50-530/8409-01).

3. Unresolved Item

An unresolved item is a matter about which more information is required in order to determine whether it is acceptable, a violation, or a deviation. One unresolved item is discussed in this report.

<u>Paragraph</u>	<u>Items</u>	<u>Description</u>
2.d	50-528/8420-01, 50-529/8415-01, and 50-530/8409-1	Receiving Inspection

4. Procurement Document Control

The NRC inspector reviewed Sections 17.1A.4 and 17.1B.4 of the PVNGS FSAR, 5 specifications, 1 procedure for receipt inspection, 28 FJs, and 28 documentation packages for nuclear items. This review was undertaken to assure that the items met the technical and quality requirements identified in the APS POs.

Although APS has overall responsibility for the control of the procurement of items for PVNGS, BPC is responsible for the preparation of the PO with a followup review and approval by APS. The inspector reviewed 28 POs to vendors of ASME Code and/or quality class "Q" items. Each PO that was reviewed called out applicable regulatory requirements (e.g., compliance

with 10 CFR Part 21), material requirements (ASME or ASTM material specifications), technical requirements (ASME Section III), and required the vendor to have a QA program in accordance with ANSI N45.2 and/or ASME NA3700/NCA3800.

The evaluated supplier list for Bechtel Nuclear Products dated March 30, 1984, and 13 external audits for 2 vendors were reviewed to assure that the material was purchased from qualified vendors.

BPC performed a review of Marathon Steel's QA manual in October 1975 and February 1976. Seven audit reports of Marathon performed in December 1974 and 1977 through 1981 were reviewed.

BPC initially audited CIPC in March 1979 and performed a QA manual review in November 1979. Five BPC audit reports, conducted annually through 1983, were reviewed. The February 1984 audit conducted by APS of CIPC was also reviewed.

In addition, six audit reports performed by APS of BPC from 1979 to 1984 were also reviewed.

5. Exit Interview

An exit interview was conducted March 30, 1984, with personnel denoted in paragraph 1 of this report. At this meeting the scope of the inspection and the findings were summarized.