

Arizona Public Service Company

May 9, 1984
ANPP-29457-TDS/TRB

U. S. Nuclear Regulatory Commission
Region V
Creekside Oaks Office Park
1450 Maria Lane - Suite 210
Walnut Creek, CA 94596-5368

Attention: Mr. John B. Martin
Regional Administrator

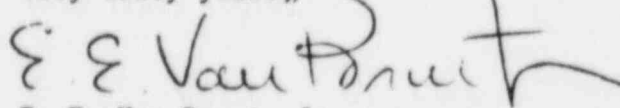
Subject: Notice of Violation
File: 84-019-026; D.4.33.2

Reference: NRC's Letter to E. E. Van Brunt, Jr., dated April 10, 1984

Dear Sir:

This letter refers to the inspection conducted by Messrs. P. P. Narbut, J. Burdoin, and D. Hollenbach between February 27, 1984 through March 9, 1984. Our response to the Notice of Violation and to the Notice of Deviation of the referenced letter is enclosed in Attachment A and Attachment B, respectively.

Very truly yours,



E. E. Van Brunt, Jr.
APS Vice President, Nuclear
ANPP Project Director

EEVB/TRB:ru

Attachment

cc: See Page Two

FILE

cc:

K. L. Turley
T. G. Woods, Jr.
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D. B. Fasnacht
A. C. Rogers
B. S. Kaplan
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G. A. Fiorelli
S. R. Frost
J. Self
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ATTACHMENT A

NOTICE OF VIOLATION

Arizona Public Service Company
Palo Verde Nuclear Generating Station

Docket Nos. 50-528, 50-529, 50-530
Construction Permit Nos.
CPPR-141, 142, 143

As a result of the inspection conducted between February 27 through March 9, 1984, and in accordance with the NRC Enforcement Policy, 10 CFR 2, Appendix C, the following violations were identified:

10 CFR 50 Appendix B Criterion V, as addressed in Section 17 of the PSAR, states, in part: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings . . . "

- A. Procedure QCI 2.4, Revision 3 "Quality Control Inspection Instructions" paragraph 5.1 states, in part, that "QC personnel utilized in the performance of inspection shall require certification prior to this assignment".

Procedure QCI 8.0, Revision 9 "Qualification Certification and Training of Quality Control Personnel" paragraph 5.2.3 shows that QC certification in the Mechanical/Piping Discipline is required for work on rotating equipment and pressure vessels.

Contrary to the above a QC inspector who was not certified in the Mechanical/Piping Discipline performed inspection verifications on rotating equipment including the Reactor Drain Pump, 1M CHN P04B on May 2, 1983, the Reator Drain Pump 1M CHN P04A on April 10, 1983 the HPSI Pump 1M SIB P02 on March 3, 1983 the Reactor Coolant Pump 1M RCE POIC (RCP2A) on April 29, 1983, the Auxiliary Feedwater Pump 1M-AF-A-P01 on March 3, 1983 and the Spray Chemical Addition Pump 1M SIA P05 on April 11, 1983. He also performed acceptance inspection on the pressure vessel component, the Reactor Vessel Instrument Flange Assembly 2M RC EX-03 on August 25, 1983.

This is a Severity IV Violation, Supplement II applicable to Units 1 and 2.

RESPONSE TO NOTICE OF VIOLATION

Corrective Steps Taken And Results Achieved

The root problem was identified as being related to Quality Control Engineers, within the welding discipline, being directed by the Project Quality Control Engineer to perform mechanical inspections during their off-shift work when mechanical inspectors were not available.

The QC documentation has been reviewed, and 11 instances have been documented where the inspector, as identified in the Notice of Violation, had made acceptance inspections on items for which he was not certified.

NCR MC-2101 was issued identifying eight (8) instances where the uncertified inspections occurred. In two (2) cases, the uncertified inspections had been voided due to subsequent work and inspections were made by a certified QCE. The six (6) remaining instances have been dispositioned by Project Engineering as "rework".

NCR NC-1345 identifies one (1) instance where uncertified inspections occurred. (This NCR has not yet been dispositioned by Project Engineering).

During the investigation of the named inspector's work one (1) more instance was discovered involving three (3) QCE's, working off-shifts, performing mechanical inspections for which they were not certified.

NCR NA-1276 has been issued identifying the inspections to Project Engineering. This NCR has been dispositioned "use-as-is" based on the subsequent disassembly, reassembly, and reinspection by a certified inspector (documentation is on file).

All Discipline QCE's are being interviewed by the PQCE to determine:

- a. Their knowledge of what certifications they hold.
- b. If, in the past, they have made inspections in areas they were not certified.

Results of the interviews to date show no other inspections have been performed by uncertified QCE's.

Records of the interviews are being maintained in the PQCE's office.

The above actions show the root problem in every case to have involved the Welding Quality Control Discipline. Consequently, the following further action will be taken:

WQCE's no longer employed at the Palo Verde jobsite have been identified to the PQCE. The PQCE is currently reviewing mechanical documentation to determine if any of these WQCE's working on the off-shift, performed any uncertified inspections.

Corrective Steps Which Have Been Taken To Avoid Further Noncompliance

Quality Control Directive #2 was issued from the Project Quality Control Engineer's office on February 29, 1984. This directive prohibits an inspector from performing inspections in disciplines for which he is not qualified. It provided instructions to the Quality Control Engineers on the requirements of the Quality Control Certification Program. This directive also instructed all Lead Quality Control Engineers to provide training to their Quality Control Engineers on this subject. This training has been accomplished and is documented in each Quality Control Engineer's training record.

Date When Full Compliance Will Be Achieved

Full compliance to the Construction Quality Control Program for certification was reaffirmed with the issuance of Quality Control Directive #2 (Rev. 1) on February 29, 1984, and subsequent training to all QC Engineers. The remaining interviews of Discipline QCE's and the review of mechanical documentation will be completed by June 19, 1984.

- B. Waldinger Procedure FQCP-10,2,3,1, Revision 8, "Inspection Fabrication and Installation of Quality Class Q HVAC Support", requires, in Paragraph 6, a fabrication and installation inspection of HVAC Supports in which QC verifies proper welding and bolting.

Bechtel Drawing 13-C-00C-003, Revision 9, "HVAC Support Details", requires, in Note 12, that shim plates may be used, not to exceed two inches (2") in thickness.

Contrary to the above, the following HVAC Supports were verified to be satisfactory by QC with the improper conditions as specified. Support TWC-301-24-185 had apparent lack of fusion in a weld and was accepted on May 26, 1982. Support TWC-301-35T-221, accepted on July 18, 1980, had improper bolting of Mark 28 and 32 in that a one-half inch ($\frac{1}{2}$ ") gap existed between the bolted members and should have had a shim plate installed. Support TWC-301-35T-220, accepted on July 11 and 18, 1980 for welding and bolting, respectively, had a fillet weld (Mark 41 to 23 and 24) which had no size specified on the Drawing and, therefore, could not be properly verified as the correct size. The support also had a shim pack between Mark 35 and 29 which measured two and one-quarter inches ($2\frac{1}{4}$ "), exceeding the two-inch (2") maximum. Support TWC-302-35-258, accepted on May 2, 1980 and January 14, 1981, had severely misaligned bolts resulting in a three-sixteenths inch ($3/16$ ") maximum gap between the bolt head and member.

This is a Severity Level IV Violation, Supplement II, applicable to Unit #2.

RESPONSE TO NOTICE OF VIOLATION

Corrective Steps Which Have Been Taken and Results Achieved

The four (4) specific supports identified by the NRC Inspector have been documented as follows:

<u>Support No.</u>	<u>Action</u>
301-24-185	The lack of fusion problem has been identified on Waldinger NCR 810F.
301-35T-221	The situation identified is in conformance with Bechtel Drawing 13-C-00C-032 which permits a gap, not to exceed one inch (1"), on longitudinal bracing. No further action will be taken.

<u>Support No.</u>	<u>Action</u>
301-35T-220	The shim pack has been identified on Waldinger NCR 795F. The weld reported as having no size specified on the Drawing is specified on Drawing 13-C-00C-011, Detail 5. The hanger drawing references this drawing. The detail specifies a five-sixteenths inch (5/16") fillet for the weld. The actual weld size is three-sixteenths inch (3/16"). Waldinger has issued NRC 811F documenting this condition.
302-35-258	Bechtel Quality Control has identified the misaligned bolting to Waldinger on the Surveillance Inspection Report.

Potential deficiencies in other HVAC installations which have been previously inspected and accepted are being identified, evaluated and resolved as follows:

- A. A sample reinspection and evaluation of results is being performed in the area of welding.
- B. The seismic adequacy of supports is being determined by an engineering walkdown and evaluation.
- C. Areas of shim inconsistencies are being evaluated by Engineering to determine the acceptance criteria and rework to be performed as appropriate.

Each of these activities is described below:

The project was aware that several possible problems exist in the as-built HVAC supports as a result of a previous investigation by Waldinger. (Reference Bechtel Document No. 13-10407-M598-205B-1, dated February 1, 1984. This condition was caused by either the misinterpretation and/or nonconformance of existing Bechtel-established criteria by Waldinger or a lack of specific Engineering criteria by Bechtel. Consequently, a Deficiency Evaluation Report (DER) No. 84-13 was initiated on February 28, 1984 and notification to the NRC made by APS.

This DER resulted in Bechtel evaluating the problems and generating additional acceptance criteria as required. This acceptance criteria is part of the five (5) Design Change Packages (DCP's (1SM, 2SM, 3CM) - HA-030, HD-009, HF-014, HC-040, HJ-035) which have been issued for the on-going project validation walkdown of the HVAC supports.

All nonconforming installations identified during these walkdowns will be documented and analyzed on a case-by-case basis. In the event that any installation is not acceptable by calculation or analysis, the installation shall be reworked or modified to an acceptable condition.

To determine and evaluate the extent of the nonconforming condition in the area of welding, the subcontractor will perform a reinspection of twenty percent (20%) of the Unit #1 safety-related hangers selected at random. Prior to the reinspection, the QC Inspectors will receive retraining. The inspection will be performed to AWS D-1.1-77 as supplemented by Attachment D of Specification 13-MM-598. All deficiencies will be documented on nonconformance reports. In addition, Bechtel QC will perform an inspection of ten percent (10%) of the Waldinger samples to verify adequacy of inspection. Engineering will evaluate the results of this reinspection activity and determine the need for additional inspection and required corrective action.

In several areas, the acceptance criteria is being reviewed and evaluated as follows:

Two (2) additional NCR's (796F and 797F) have been written by the Waldinger Company to identify instances where shimming has been used in gaps in excess of two inches (2"). The Waldinger Company has issued a Subcontract Change Request (SCCR No. FW-562) requesting Bechtel Engineering clarification of the acceptance criteria. The need for further inspection will be evaluated, based upon the Engineering resolution of the SCCR.

Waldinger has requested Bechtel Engineering, on SCCR No. FW-564, to provide a clarification of acceptance criteria for misaligned bolting situations. This will be the basis for Waldinger disposition of Bechtel QC's Surveillance Inspection Report on Support 302-35-258. The need for reinspection and additional corrective action will be decided, based upon the Engineering criteria.

Corrective Steps Taken To Avoid Further Noncompliance

The Waldinger Company has purchased additional inspection aids, has provided orientation and indoctrination to welders, foremen and engineers and is presently indoctrinating inspectors as part of an on-going training program. These training sessions include all aspects of quality and attention to details of the design requirements. Training records are on file in Waldinger's QC office.

The current Bechtel QC Program requires surveillance inspections to verify Waldinger compliance to their Quality Program. To ensure adequacy of subcontractor inspections, this Program will be upgraded by revisions to the WPP/QCI No. 153.0 to require the assigned Quality Control Engineer to surveil the subcontractor daily when safety-related work is in process. Observation of those daily surveillances will be documented weekly on a surveillance report. Included in the surveillance, will be verification of hardware installation in accordance with the same acceptance criteria used by the subcontractor.

Additionally, the Final Report for DER 84-13 will provide any other corrective actions necessary to preclude recurrence based on deficiencies identified on the walkdowns.

Date When Full Compliance Will Be Achieved

Engineering will clarify the additional acceptance criteria by June 1, 1984. Any reinspection and rework required by this clarification, as well as the welding reinspection and rework, will be completed by September 19, 1984.

The Final Report for DER 84-13 will identify all corrective action covering Units #1, #2 and #3 and will be issued by December 14, 1984. However, all Unit #1 items will be resolved by September 19, 1984.

ATTACHMENT B

NOTICE OF DEVIATION

Arizona Public Service Company
Palo Verde Nuclear Generating Station

Docket Nos. 50-528, 50-529, 50-530
Construction Permit No. CPPR-141,
142, 143

As a result of the inspection conducted on February 27-March 9, 1984 and in accordance with the NRC Enforcement Policy 10CFR2, Appendix C, the following Deviation was identified:

FSAR, Section 1.8, states that Regulatory Guide 1.52 applies to the Control Building and Fuel Building ventilation systems.

Regulatory Guide 1.52, Paragraph 1.52.1, states, in part, that the effects of radiation should be considered for any joining compounds that are necessary for operation during a postulated DBA.

Contrary to this commitment, no documentary evidence was available to demonstrate that the duct sealant, Scotch-Seal Product 1168, used as a gasketing material for instrumentation connections to duct was suitable for environmental conditions. The sealant is used in Control Building, Fuel Handling Building, Auxiliary Building and the Containment environments.

RESPONSE TO NOTICE OF DEVIATION

Corrective Steps Taken and Results Achieved

The Waldinger Corporation is conducting a review of overall usage of sealant in duct systems. In the specific case cited by the Deviation, The Waldinger Corporation is taking the following action:

1. Identification of where sealant has been used.
2. Verification that the sealant used was Scotch Seal 1168.
3. Obtaining environmental qualification of Scotch Seal 1168.

To date, The Waldinger Corporation has identified eleven (11) instances where sealant has been used in unauthorized application. These installations have occurred in the Unit #2 and #3 Control Buildings. These instances have been documented by TWC Nonconformance Reports. Additionally, The Waldinger Corporation will verify the type of sealant utilized in each unauthorized application.

Scotch Seal 1168 will be submitted to an approved, independent engineering test laboratory for environmental qualification in accordance with Specification 13-MM-598.

Corrective Steps Which Will Be Taken To Avoid Further Noncompliances

The need for additional inspections, and administrative or in-process controls, to control the use of sealant by the subcontractor, The Waldinger Corporation, will be determined based on the results of the action specified above.

The Waldinger Corporation will conduct training sessions with foremen, engineers and quality control inspectors. This training will include all aspects of quality and attention to detail of the design requirements, including the use of sealant.

Date When Full Compliance Will Be Achieved

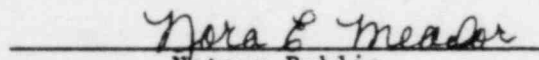
Compliance will be achieved by August 1, 1984.

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Vice President, Nuclear Projects of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.


Edwin E. Van Brunt, Jr.

Sworn to before me this 9th day of May, 1984.


Notary Public

My Commission Expires:

My Commission Expires April 6, 1987