

Arizona Public Service Company

September 10, 1984  
ANPP-30470-TDS/TRB

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

Attention: Mr. T. W. Bishop, Director  
Division of Resident  
Reactor Projects and Engineering Programs

Subject: Final Report - DER 84-12  
A 50.55(e) Reportable Condition Relating To Zone III  
Violations Of RCP 1A And S/G #1.  
File: 84-019-026; D.4.33.2

Reference: A) Telephone Conversation between P. Narbut and T. Bradish on  
March 14, 1984  
B) ANPP-29269, dated April 10, 1984 (Interim Report)  
C) ANPP-29610, dated May 29, 1984 (Time Extension)  
D) ANPP-30352, dated August 29, 1984 (Time Extension)

Dear Sir:

Attached is our final written report of the deficiency referenced above,  
which has been determined to be Not Reportable under the requirements of  
10CFR50.55(e).

Very truly yours,

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

EEVB/TRB/nj  
Attachment

cc: See Page Two

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Mr. T. W. Bishop  
DER 84-12  
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FINAL REPORT - DER 84-12  
DEFICIENCY EVALUATION 50.55(e)  
ARIZONA PUBLIC SERVICE COMPANY (APS)  
PVNGS UNIT 1

I. Description of Deficiency

During surveillance of the Unit 1 startup program, potential violations of ANSI N45.2.1, Cleaning of Fluid Systems and Associated Components During the Construction Phase of Nuclear Power Plants, and N45.2.3, Housekeeping During the Construction Phase of Nuclear Power Plants, were discovered as follows:

A. Reactor Coolant Pumps (RCPs)

As authorized by Startup Work Authorization (SWA) 17082, Combustion Engineering (CE) personnel were performing drilling and reaming operations inside the RCPs as part of the pump suction pipe/diffuser taper pins modification. Zone III requirements were imposed per Combustion Engineering Site Process Sheet (SPS) 3005-652200, Diffuser and Suction Pipe Assembly. Nonconformance Report (NCR) SM-3667 documents the presence of cutting fluid and metal chips found inside the casing of all four RCPs.

While CE was performing the pump modifications, an unrelated evolution was in process requiring the placement of a metal dam at the discharges of the RCP. Bechtel Construction removed the required wooden barrier originally placed in the pump discharge piping per CE Zone III cleanliness requirements and replaced it with the metal dam. Bechtel Construction had established a Zone III cleanliness area from the barrier to the reactor vessel and worked within that zone requirement. However, while the wooden barrier was being replaced with the metal dam, some grinding was done which violated the cleanliness requirement.

B. Steam Generator

In an unrelated incident, a possible violation of Zone III cleanliness may have occurred when the Steam Generator No. 1 manway was removed without adequate zone coordination. This condition created a potential for grinding dust from nearby construction activity to enter the Reactor Coolant System (RCS).

### Evaluation

#### A. Reactor Coolant Pumps

Since the modification work on RCPs 1B, 2A, and 2B was completed at the time of discovery, CE Deviation Notice (DN) No. 3753 was issued and subsequently all three pump casings were returned to Grade B cleanliness in accordance with SPS 3005-653500 RCP Casing Cleaning. Pump 1A was still being worked on. Following its completion, it was restored to Grade "B" cleanliness per SPS 3005-652200, Diffuser and Suction Pipe Assembly. The restoration of pump casing cleanliness is documented in NCR SM-3667.

Upon completion of the grinding work associated with the metal dam installations, the internals of the RCPs were returned to cleanliness Grade "B" per SPS 3005-652600, Seal Housing Installation.

The cause of this condition is Bechtel Construction removing the metal dam without realizing Zone III requirements would be violated due to the work in progress by CE craft. The same modifications have been completed in Units 2 and 3 without a zone cleanliness violation; therefore, this condition is considered to be an isolated instance.

#### B. Steam Generator

As part of completing the work required by the Unit 1 RCP modification program, the entire primary loop was inspected and returned to Grade B cleanliness. Also, performance of the demonstration test served as a subsequent flushing operation which provided additional assurance that any remaining dust from grinding operations would be removed, since the entire RCS was drained for post-demonstration test inspection.

## II. Analysis of Safety Implications

This condition is evaluated as not reportable under the requirements of 10CFR50.55(e) or 10CFR Part 21; since, if the condition were to remain uncorrected, it would not represent a significant safety condition.

III. Corrective Action

Remedial Action:

The entire Unit 1 RCS has been returned to Class B cleanliness per the disposition of NCR SM-3498 and the demonstration test has been completed.

Action to Preclude Recurrence:

- A. To provide protection of the appropriate components when work is not being performed, a procedural change to Bechtel Construction procedure WPP/QCI-13.0, Housekeeping, has been issued. This procedural change prevents debris from contaminating exposed NSSS components by requiring protective covers be placed over NSSS structures and components whenever left unattended for more than one hour unless under test conditions or installed in place.
- B. To provide the same protection when APS is working on the components, a Maintenance Department Instruction has been initiated to require that the same protective material be applied when work is not being performed on the components.
- C. CE letter V-CE-30467, June 27, 1984, has been issued to include the same requirements in CEND 353.
- D. These procedural changes have been reviewed and discussed with personnel from Bechtel, APS Operations Maintenance, and CE to assure understanding and proper implementation.