Arizona Nuclear Power Project
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April 11, 1986
ANPP-36076/EEVB/LAS/DRL-92.11

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

Attention: Mr. D. F. Kirsch, Acting Director
Division of Reactor Safety and Projects
Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. 50/530

Subject: Interim Report - DER 86-10
A 50.55(e) Potentially Reportable Deficiency Relating To
Saturation of Radiation Monitoring Instruments

File: 86-006-216; 86-056-026; D.4.33.2

Reference: Telephone Conversation between R. C. Sorenson and T. R. Bradish on March 12, 1986 (Initial Reportability - DER 86-10)

Dear Sir:

The NRC was notified of a potentially reportable deficiency in the referenced telephone conversation. At that time, it was estimated that a determination of reportability would be made within thirty (30) days. (April 11, 1986)

Due to the extensive investigation and evaluation required, an Interim Report is attached. It is now expected that this information will be finalized by June 5, 1986, at which time a complete report will be submitted.

Very truly yours,

E E Van Brunt Jr

E. E. Van Brunt, Jr.
Executive Vice President
Project Director

EEVB/DRL/ldf

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cc: See Page Two

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IE-27

cc: J. M. Taylor, Director
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INTERIM REPORT - DER 86-10
POTENTIAL REPORTABLE DEFICIENCY
ARIZONA NUCLEAR POWER PROJECT
PVNGS UNIT 3

I. Potential Problem

Kaman Instrumentation Corporation notified ANPP on February 22, 1986 of a possible defect in the operation of their noble gas radiation monitors (Project Tag Nos. JSQNRU-142, JSQNRU-144 and JSQBRU-146) Model KMG-HRH with detector Model KDGM-HR, part no. 952397-003. Kaman advised that the monitors could saturate at 1×10^3 micro-curies per cc, which is 2 decades below full scale (Reference 2). The saturation occurs in the software and not in the electro-mechanical portion of the monitor (Reference 3). These monitors are used in the Radiation Monitoring System (RMS) to detect high radiation in the Condenser Vacuum System Exhaust (RU-142), Plant Vent (RU-144), and Fuel Building (RU-146).

Kaman has also notified the NRC of the possible defect of the above monitors (Reference 1).

II. Approach To and Status of Proposed Resolution

ANPP verified this condition by testing the Units 1 and 2 monitors (Reference 2). Test results show the monitors saturated at 3×10^4 micro-curies per cc.

The required upper range for these monitors in micro-curies per cc is as follows:

	RU-142	RU-144	RU-146
Specification (Instr. Data Sheets)	1×10^5	1×10^5	1×10^5
FSAR, Table 11.5	1×10^5	1×10^5	1×10^5
NUREG 0737, Table II F.1-1	1×10^5	1×10^4	1×10^3
Reg. Guide 1.97	1×10^5	1×10^4	1×10^3

Since the saturation level of all three instruments is 3×10^4 micro-curies per cc, both RU-144 and RU-146 meet NUREG 0737, Table IIF.1.1 and Reg. Guide 1.97.
The maximum radioactivity level that RU-142 must monitor is 1.22×10^4 micro-curies per cc (Reference 2) so it would not give any false readings. Hence, this condition is not safety-significant, and continued operation in Units 1 and 2 poses no safety hazard.

Kaman has requested additional testing for the monitors in Units 1 and 2 which will be performed by ANPP. The Unit 3 monitors must be tested, but it has not yet been determined who will perform the tests.

III. Projected Completion of Corrective Action and Submittal of the Final Report

The complete evaluation and final report are forecast for June 5, 1986.

ldf/001/IR-86-10

REFERENCES

(1) KI-GEN-86-001, Kaman Letter to NRC, February 27, 1986

(2) EER #86-SQ-039, February 27, 1986

(3) MIC 254021, Kaman Letter to BPC, March 24, 1986