REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8505030518 DOC.DATE: 85/05/01 NOTARIZED: YES DOCKET #
FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME RECIPIENT AFFILIATION
KNIGHTON,G.W. Licensing Branch 3

SUBJECT: Forwards jusitification for continued operation of primary coolant sys radiation monitors required to meet guidance of Reg Guide 1.97,Rev 2,Review of all other instrumentation to insure that equipment fully qualified initiated.

DISTRIBUTION CODE: A048D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6
TITLE: OR/Licensing Submittal: Equipment Qualification

NOTES:Standardized plant. 05000528
OL:12/31/84

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR LB3 BC	12	1	0	LICITRA,E	01	1	1
INTERNAL:	ACRS	15	8	8	ADM/LFMB		1	0
	ELD/HDS3	12	1	1	ELD SHIELDS,W		1	1
	GC	13	1	1	NRR KARSCH,R		1	1
	NRR/DE/EQB	07	2	2	NRR/DL DIR	14	1	1
	NRR/DSI/AEB		1	1	REG FILE	04	1	1
	RGN5		1	1				
EXTERNAL:	LPDR	03	1	1	NRC PDR	02	1	1
	NSIC	05	1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 24 ENCL 22

Arizona Nuclear Power Project
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

Director of Nuclear Reactor Regulation
Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ANPP-32541-EEVB/BJA
May 1, 1985

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket Nos. STN 50-528, License No. NPF-34
Environmental Qualification
File: 85-056-026; G.1.01.10

References: (1) Generic letter 84-24 dated December 27, 1984; Subject: Certification to 10 CFR 50.49, Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants.
(2) Letter from E. E. Van Brunt, Jr., ANPP, to G. W. Knighton, NRC, dated February 8, 1985 (ANPP-31895); Subject: Certification of Compliance to 10 CFR 50.49.
(3) Letter from E. E. Van Brunt, Jr., ANPP, to G. W. Knighton, NRC, dated December 5, 1984 (ANPP-31333); Subject: Post Accident Sampling System.

Dear Mr. Knighton:

Reference (1) requested that each licensee of an operating reactor submit a certification that: (a) the utility has in place and is implementing an Environmental Qualification Program that will satisfy the requirements of 10 CFR Section 50.49; (b) the plant has at least one path to safe shutdown using fully qualified equipment, or has submitted a justification for continued operation (JCO); and (c) all other equipment within the scope of 50.49 is either fully qualified or a JCO has been submitted. ANPP provided the requested certification in the letter of Reference (2). Subsequent to the Reference (2) submittal, ANPP has identified two additional radiation monitors which are not currently qualified per the requirements of 10 CFR 50.49. These two radiation monitors fall within the scope of 50.49 and a JCO has not been provided for them. This submittal is intended to revise the response given in Reference (2) and to provide a justification for continued safe operation for the two radiation monitors (primary coolant system radiation monitors).

A048
1/1

The primary coolant system radiation monitors are required to be qualified because they are required to meet the guidance of Regulatory Guide 1.97, revision 2. ANPP has initiated a review of the qualification status of all other Reg. Guide 1.97, rev. 2 instrumentation to insure that the equipment is either fully qualified or a JCO has been provided to the staff.

If you have any questions on this matter, please contact Mr. W. F. Quinn of my staff.

Very truly yours,

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

EEVB/BJA/mb

cc: E. A. Licitra (w/a)
H. Garg (w/a)
R. LaGrange (w/a)
R. P. Zimmerman (w/a)
A. C. Gehr (w/a)

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Executive Vice President, Arizona Nuclear Power Project, 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

Edwin E. Van Brunt, Jr.

Sworn to before me this 1st day of May, 1985.

Dora E. Meador
Notary Public

My Commission Expires:
My Commission Expires April 6, 1987

ATTACHMENT

Justification for Continued Operation for
Primary Coolant System Radiation Monitors

PURCHASE ORDER NUMBER:	DESCRIPTION:	PROJECTED COMPLETION DATE:
13-NM-997	Radiation Monitors	November 30, 1985

TAG NUMBER:	ENVI. DESIG.	SAFETY FUNCTION
J-SQA-RU-150	I	Provide an indication of the activity levels of the primary coolant system (alarm only).
J-SQB-RU-151	I	Provide an indication of the activity levels of the primary coolant system (alarm only).

HISTORY:

The primary coolant radiation monitors are Category I, Type C variables per Regulatory Guide 1.97, Revision 2. The mineral insulated (MI) cable, that connects the detector to the electrical penetration, failed LOCA/MSLB testing at the cable connector interface in June, 1983. Subsequently, the vendor has successfully completed post-accident qualification testing of the radiation detectors, MI cables, and modified connectors in November, 1984.

One of the primary coolant system radiation monitors (RU-151) has been removed from service due to detectors operability concerns. The detector was not functioning properly and has been returned to the vendor for repairs and connector changeout to support environmental qualification.

Delivery of the modified cables with connectors and containment penetration assemblies is expected to be complete by May of 1985 which is after the date which Palo Verde Unit 1 entered Mode 4. Due to the nature of the modification, it is not expected that the vendor can improve on this delivery date. Technical Specification 3.6.1.1 states, "Primary Containment integrity shall be maintained in Modes 1, 2, 3 and 4". Therefore, the reinstallation work on the containment penetration assemblies must be conducted while the plant is in Modes 5 or 6. The current plan for the reinstallation of the detector, MI cables and containment penetration assemblies for RU-151 is as follows:

1) Reinstall the modified equipment during the first outage of sufficient duration to accomplish the work that takes the plant into Mode 5.
2) Installation of qualified equipment no later than November 30, 1985.

RU-150 is the other primary coolant radiation monitor. This monitor has been rendered inoperable and is in the process of being reworked to implement the environmentally qualified design. The containment penetration assembly has been reworked and installed for this monitor. The environmentally qualified MI cables and detectors are expected to be delivered in May, 1985. The environmentally qualified radiation detector and MI cables are expected to be installed and operational prior to November 30, 1985.

JUSTIFICATION FOR CONTINUED OPERATION:

The activity levels of the primary coolant will be determined by sampling in accordance with Technical Specification 3/4.4.7 during normal operation. In the unlikely event that a LOCA/MSLB accident occurs prior to establishing the post-accident qualification of these monitors, primary coolant monitoring will be performed using grab samples from the Post-Accident Sampling System (PASS). Palo Verde Unit 1 will have the capability to take PASS grab samples prior to exceeding 5% power. The NRC staff has found the PASS implementation schedule to be acceptable since, prior to exceeding 5% power, only low concentrations of radioactive material will exist in the primary coolant system and the health and safety of the public will not be affected.

The function of the primary coolant system radiation monitors is to provide an alarm to the control room operators. The monitors do not automatically initiate any safety functions. In the event that the control room operator receives an alarm from either of these radiation monitors, his response would be to notify the Chemistry Department per the alarm response procedure (Station Manual #41AL-1SQ01). The control room operator would take the same action if either of the monitors were out of service.

This justification for continued operation is acceptable for the following reasons:

1) These monitors do not initiate any safety function.
2) The operators are not required to institute any manual actions based on the information provided by these monitors.
3) There is an acceptable alternate means of determining the activity levels of the primary coolant system.

BEST EFFORTS:

The vendor of the primary coolant radiation monitors committed to meet the requirements of IEEE 327-1974 predominately through prototype testing. Over the past four years, the vendor has performed extensive environmental qualification testing. ANPP has participated extensively in the equipment qualification effort. ANPP, joining efforts with the vendor and another connector manufacturer, participated in the redesign, fabrication, and qualification testing of the cable/connector combination.

The third cable/connector design was successfully qualified on November 29, 1984. ANPP has continued to provide support to the vendor in order to expedite the manufacturing and delivery of the equipment. The manufacturing and quality assurance of the work is a lengthy process due to the precision with which the MI cables and penetration assemblies must be fabricated.