REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8412040032 DOC.DATE: 84/11/30 NOTARIZED: YES DOCKET #
FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME. RECIPIENT AFFILIATION
KNIGHTON,G.W. Licensing Branch 3

SUBJECT: Forwards clarification to Footnote 7.(h) in FSAR Table 3.2-1 re design of hangers & supports to same classification as associated equipment or piping required for safety.

DISTRIBUTION CODE: B001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6
TITLE: Licensing Submittal: PSAR/FSAR Amdts & Related Correspondence

NOTES:Standardized plant. 05000528
Standardized plant. 05000529
Standardized plant. 05000530

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR/DL/ADL		1	0	NRR LB3 BC		1	0
	NRR LB3 LA		1	0	LICITRA,E	01	1	1
INTERNAL:	ACRS	41	6	6	ADM/LFMB		1	0
	ELD/HDS3		1	0	IE FILE		1	1
	IE/DEPER/EPB	36	1	1	IE/DEPER/IRB	35	1	1
	IE/DQASIP/QAB	21	1	1	NRR ROE,M.L		1	1
	NRR/DE/AEAB		1	0	NRR/DE/CEB	11	1	1
	NRR/DE/EHEB		1	1	NRR/DE/EQB	13	2	2
	NRR/DE/GB	28	2	2	NRR/DE/MEB	18	1	1
	NRR/DE/MTEB	17	1	1	NRR/DE/SAB	24	1	1
	NRR/DE/SGEB	25	1	1	NRR/DHFS/HFEB	40	1	1
	NRR/DHFS/LQB	32	1	1	NRR/DHFS/PSRB		1	1
	NRR/DL/SSPB		1	0	NRR/DSI/AEB	26	1	1
	NRR/DSI/ASB		1	1	NRR/DSI/CPB	10	1	1
	NRR/DSI/CSB	09	1	1	NRR/DSI/ICSB	16	1	1
	NRR/DSI/METB	12	1	1	NRR/DSI/PSB	19	1	1
	NRR/DSI/RAB	22	1	1	NRR/DSI/RSB	23	1	1
	REG FILE	04	1	1	RGN5		3	3
	RM/DDAMI/MIB		1	0				
EXTERNAL:	BNL(AMDTS ONLY)		1	1	DMB/DSS (AMDTS)		1	1
	FEMA-REP DIV	39	1	1	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
	NTIS		1	1	PNL GRUEL,R		1	1

TOTAL NUMBER OF COPIES REQUIRED: LTTR 54 ENCL 46

Arizona Public Service Company

ANPP-31273-EEVB/WFQ/TJB
November 30, 1984

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

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
FSAR Table 3.2-1, Footnote 7.(h) Clarification
File: 84-056-026; G.1.01.10

Dear Mr. Knighton:

Attachment 1 provides a clarification to footnote 7.(h) of the PVNGS FSAR table 3.2-1 required due to a recently discovered previous typographical error. Attachment 2 provides a discussion regarding this clarification. We believe this clarification is technically insignificant since the PVNGS project work was accomplished to the correct criteria.

Very truly yours,

E E Van Brunt

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

EEVB/WFQ/mb
Attachments

cc: E. A. Licitra
A. C. Gehr
W. E. Ide
R. P. Zimmerman

B001
1/1

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Donald B. Karner, represent that I am Assistant Vice President, Nuclear Production 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.

Donald B. Karner

Sworn to before me this 30th day of November, 1984.

Nora E. Meader
Notary Public

My Commission Expires:
My Commission Expires April 6, 1987

Table 3.2-1
QUALITY CLASSIFICATION OF STRUCTURES, SYSTEMS AND COMPONENTS (Sheet 36 of 39) |12

7. Letter in parentheses (continued)

American Welding Society, Welding in Building Construction (AWS D1.1-72), (with 1973 revision, or later edition) |12

Uniform Building Code, 1973 Edition
See section 3.8.1.2. |12

(b) American Petroleum Institute, Welded Steel Tanks for Oil Storage (API-650)

American Petroleum Institute, Recommended Rules for Design and Construction of Large, Welded, Low-Pressure Storage Tanks (API-620)

(c) Designed in accordance with BC-TOP-, Rev. 1.

(d) The pressure boundary housing for this component is a reactor vessel appurtenance and is Safety Class 1 and Seismic Category I.

(e) These components and associated supporting structures must be designed to retain structureal integrity during and after a seismic event but do not have to retain operability for protection of public safety. The basic requirement is prevention of structural collapse and damage to equipment and sutuctures required for protection of the public safety.

(f) Only those core support structures necessary to support and restrain the core and to maintain safe shutdown capability are classified as Seismic Category I.

(g) There is no established standard for commercial pumps. ASME Section VIII, Division 1, and ANSI B31.1.0 Power Piping represent related, availabele standards which, while intended for other applications, are used for guidance and recommendations in determining quality group D pump allowable stresses, steel casting quality factors, wall thicknesses, materials compatibility and specifications, temperature-pressure environment restrictions, fittings, flanges, gaskets, and bolting, installation procedures, etc.

(h) Hangers and supports are designed to the same classification as the associated equipment or piping when the equipment is required for safety. ~~In addition, supports and hangers for noncafety-related cystems are designed to Seismic Category I requirements when failure of the equipment of piping could adversely affect a safety-related cystem.~~ INSERT A

(i) Additional components that are part of the reactor coolant pressure boundary as defined in 10CFR50.2(v.), but excluded from the requirements fo 10CFR50.55a pursuant to footnote 2 of that section are quality group B and safety class 2 and designed to ASME Section III Class 2.

(j) Loss of cooling water and/or seal water service to the reactor coolant pumps may require stopping the pumps. However, continuous operation of the pumps in not required during or after an SSE. The auxiliaries are therefore not necessarily Safety Class 2 or Seismic Category I.

(k) Only those structural portions of the reactor coolant pumps which are necessary to assure the integrity of the reactor coolant pressure boundary are Safety Class 1.

(l) Two safety classes are used for heat exchangers to distinguish primary and secondary sides when they are different.

(m) Penetration Sleeve is designed in accordance with BC-TOP-1, Rev. 1. Penetration Head meets ASME B&PB Code Section III Class 2.

INSERT A

Non-safety portions of structures, systems or components whose failure could reduce the functioning of any safety-related structure, system or component are designed and constructed such that an SSE would not cause such failure.

ATTACHMENT 2

The following information discusses the history leading to the clarification to footnote 7.(h) of the PVNGS FSAR Table 3.2-1.

The PVNGS FSAR footnote 7.(h) to table 3.2-1 is based on our project design criteria. In January, 1978, (which was prior to the PVNGS FSAR) footnote 7.(h) from our design criteria read as follows:

(h) "Equipment, piping hangers and supports are designed to the same classification as the associated equipment or piping, except supports and hangers for non-Seismic Category I equipment, piping, trays and ducts whose failure would result in unacceptable damage to safety related equipment during or after an SSE. These hangers and supports shall be designed to withstand an SSE with no loss of structural integrity identified on location drawings as Seismic Category IX."

The term "Seismic Category IX" is defined in our project design criteria as follows:

"Seismic Category IX structures and components are those non Seismic Category I structures and components whose failure due to SSE loads could impact adjacent Seismic Category I structures or components.

Seismic Category IX structures and components shall be designed to experience no structural failure that might result in the malfunction of adjacent Seismic Category I structures or components when subjected to the vibratory motions of the SSE in combination with the normal operating loads."

This definition is based on Regulatory Guide 1.29, Revision 1 (Seismic Design Classification), position C.2.

In October, 1979, when the FSAR was completed, the footnote 7.(h) was paraphrased from the design criteria as follows:

"Hangers and supports are designed to the same classification as the associated equipment or piping when the equipment is required for safety. In addition, supports and hangers for nonsafety-related systems are designed to Seismic Category I requirements when failure of the equipment of piping could adversely affect a safety related system."

An inappropriate word choice was made in the second sentence of this FSAR note. The second sentence of the note should have stated "...analyzed to Seismic Category I..." instead of "...designed to Seismic Category I...". When it is determined that a nonsafety-related structure, system, or component could impact an adjacent Seismic Category I item, a dynamic or equivalent static <u>analysis</u> is performed using the relevant building response spectra to demonstrate structural integrity. These supports are designed to PVNGS Quality Class R criteria whereas Seismic Category I supports are designed to PVNGS Quality Class Q criteria.

About September, 1982, the project design criteria table was updated using the PVNGS FSAR table, thus bringing the incorrect word choice back into the design criteria.

The PVNGS project work has been accomplished to the correct R.G. 1.29 criteria. Field work was unaffected by this typo and this change has no technical significance. The PVNGS FSAR and design criteria have been clarified so that the words reflect what the project position has been. Also the term "Seismic Category IX" which should have been in the FSAR footnote 7.(h) is being eliminated and appropriate words inserted in its place (as shown on Attachment 1).