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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
NOVAK,T.H Assistant Director for Licensing

SUBJECT: Forwards proposed amended pages to FSAR Section 6.2.6, providing Type C testing of valves associated w/containment penetrations 44,67 & 77 using air.Affidavit encl.

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ARIZONA PUBLIC SERVICE COMPANY
P. O. BOX 21666 · PHOENIX, ARIZONA 85036

October 22, 1982
ANPP-22081 - WFQ/KEJ

Mr. T. H. Novak
Assistant Director of Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
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
File: 82-056-026; G.1.01.10

Reference: Letter from E. E. Van Brunt, Jr., APS, to T. H. Novak, NRC, dated August 11, 1982.

Dear Mr. Novak:

This letter clarifies APS' position for type C testing of containment penetrations 44, 67 and 77.

Reference (1) previously submitted a proposed amended section 6.2.6 of the FSAR to provide local leak rate testing of certain valves associated with penetrations 44, 67 and 77, using water in lieu of air or nitrogen. This proposal was discussed in a subsequent telephone conversation between the NRC staff and APS on August 19, 1982. APS now plans to Type C test penetrations 44, 67 and 77 using air. Attached are proposed amended pages to section 6.2.6 of the FSAR which supercedes that of reference (1) and which reflects this current position.

If you have any questions concerning this matter, please contact me.

Very truly yours,

E. E. Van Brunt QAR

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

EEVBJr/KEJ/sp
Attachment

cc: E. Licitra (w/a) J. Huang (w/a) L. Bernabei (w/a) P. Hourihan (w/a)
A. C. Gehr (w/a)

A001

ANPP-22081 - WFQ/KEJ
October 22, 1982

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

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

A. Carter Rogers

Sworn to before me this 22nd day of October, 1982

David L. Graham
Notary Public

My Commission expires:

My Commission Expires May 19, 1986

My Commission Expires May 19, 1986

Table 6.2.6-3

CONTAINMENT ISOLATION VALVE TESTING (Sheet 9 of 12)

Penetration Number	42C		43		44		45		46,47,48,49	50		
Valve Arrangement (see figure 6.2.4-1)	21		21		6		13		39	3		16
Function	Hot leg sample		RCP bleedoff		Reactor drain tank drain		Reactor drain tank makeup		SG blowdown	Pool cooling		
Vented and drained for Type A test	Yes[b]		Yes[b]	Yes[b]	Yes[b]		Yes[b]		No[a]	Yes		
Containment isolation valve tag nos.	SSA-UV203	SSB-UV200	CHA-UV506	CHB-UV505	CHA-UV560	CHB-UV561	CHE-V494	CHA-UV580	None[a]	PCE-V071	PCE-V070	
Valve sizes	3/8	3/8	1	1	3	3	1-1/2	1-1/2		4	4	
Valve type	Globe	Globe	Globe	Globe	Gate	Gate	Check	Gate		Gate	Gate	16
Location	CB	AB	CB	AB	CB	AB	CB	AB		CB	AB	
Type C tested	Yes	Yes	Yes	Yes	Yes[c]	Yes[c]	Yes	Yes		Yes	Yes	18
Test pressure on CB side	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Status during Type A test	C	C	C	C	C	C	NA	C		C	C	

Table 6.2.6-3

CONTAINMENT ISOLATION VALVE TESTING (Sheet 11 of 12)

Penetration Number	58	59		60		61		62A	63A,63B	67		62B,62C
Valve Arrangement (see figure 6.2.4-1)	27	28		24		25		37	39	36		27
Function	CB ILRT	Service air		Chilled water		Chilled water		CB pressure monitor	SGBD sample	Long Term recirc		CB ILRT
Vented and drained for Type A test	NA	Yes		No		No		Yes	No[a]	Yes[b]		NA
Containment isolation valve tag nos.	Flange	IAE-V073	IAE-V072	WCE-V039	WCB-UV063	WCB-UV061	WCA-UV062	HCD-HV077	None[a]	SIB-V533	SID-HV331	Flanges
Valve sizes	8	3	3	10	10	10	10	3/4		3	3	3/4
Valve type	Flanges	Check	Globe	Check	Gate	Gate	Gate	Globe		Check	Globe	Flanges
Location	CB AB	CB	AB	CB	AB	CB	AB	AB		CB	AB	CB AB
Type C tested	Type B	Yes	Yes	Yes	Yes	Yes	Yes	No[e]		Yes[d] (c)	Yes[d] (c)	Type B
Test pressure on CB side	NA	Yes	Yes	Yes	Yes	Yes	Yes	NA		No[d] NA	No[d] Yes	NA
Status during Type A test	NA	NA	C	NA	C	C	C	O		NA	C	NA

6

1

Table 6.2.6-3

CONTAINMENT ISOLATION VALVE TESTING (Sheet 12 of 12)

Penetration Number	72		75,76	77		78		79		L1,L3	L2
Valve Arrangement (see figure 6.2.4-1)	38		15	36		22		30		26	20
Function	RCP seal injection		Aux FW	Long term recirc		CB purge		CB purge		Air Locks	Eqpt Hatch
Vented and drained for Type A test	Yes[b]		No[a]	Yes[b]		Yes		Yes		NA	NA
Containment isolation valve tag nos.	CHE-V835	CHE-HV255	None[a]	SIA-V523	SIC-HV321	CPB-UV005A	CPA-UV004A	CPA-UV004B	CPB-UV005B	NA	NA
Valve sizes	1-1/2	1-1/2		3	3	8	8	8	8	NA	NA
Valve type	Check	Globe		Check	Globe	B'fly	B'fly	B'fly	B'fly	NA	NA
Location	CB	AB		CB	AB	CB	AB	CB	AB	NA	NA
Type C tested	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Type B	Type B
Test pressure on CB side	Yes	No		NA	Yes	No[e]	Yes	No[e]	Yes	NA	NA
Status during Type A test	NA	C		NA	C	C	C	C	C	C	C

purpose of performing Type C tests would impair the operability of these engineered safety features.

Inservice testing and inspection of these isolation valves, and also the associated piping system outside the containment, will be performed periodically under the ISI requirements of ASME XI. During normal operation, the systems are water filled and degradation of valves or piping would be readily detected.

~~In~~ the CVCS system, the isolation valves in the reactor drain tank line ~~and the letdown and charging line~~ will be Type C tested using water. This is justified on the basis that ~~these~~ lines would be filled with water in the event of a LOCA, the reactor drain tank being below the post-LOCA water level. ~~and the charging line filled by connection to the reactor coolant system. The shutdown cooling isolation valves will be tested using water since this system will always be full during the shutdown phases. To drain in order to test with air would jeopardize core cooling.~~

INSERT A

Isolation valves connected to the secondary side of the steam generator, such as main steam isolation valves, main steam relief valves, feed water valves, blowdown lines, and blowdown sample lines are not considered containment isolation valves and are not subjected to Type C tests. If there is leakage from primary to secondary side, the steam generator may be flooded in the event of a LOCA to effectively seal any tube leaks. If required, the filling of the steam generators will be performed by the auxiliary feedwater system, which meets the single failure criteria.

Valves which are Type C tested are tested with the applied test pressure in the same direction as the pressure existing following an accident, except the butterfly and relief valves listed in table 6.2.6-3. Due to the design of these valves, the test leakage will inherently be equal to or greater than the leakage following an accident.

INSERT A to page 6.2.6-23

facility TECHNICAL Specifications will be proposed limiting acceptable leakage through CHA UV 560 and CHB UV 561 to no more than 7.25 gal/min, which is based on limiting 30 day post LEAKAGE TO THE 42,000 ft^3 of WATER between the minimum post-LOCA WATER LEVEL and the highest point of the drain line under a pressure of 1.1 Pa.

The long term recirculation lines (PENETRATIONS 67 and 77) are Type C tested using WATER. As shown in VALVE Arrangement 36 on figure 6.2.4-1, the test boundary for Type C testing these penetrations is a check valve between the isolation valves and the reactor coolant system, making an air test impractical. facility TECHNICAL Specifications will be proposed specifying an acceptance criteria for valves in penitrations 67, and 77 of that number of CC/min of WATER THAT correspond to 0.1 La, had the test been accomplished using air, applying the conversion factor of article IWV-3426 of ASME Boiler and Pressure Vessel Code, Section XI, Winter 1980 edition.