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 FACIL: STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publ 05000529
 AUTH. NAME: AUTHOR AFFILIATION:
 VAN BRUNT, E. E. Arizona Nuclear Power Project (formerly Arizona Public Serv
 RECIP. NAME: RECIPIENT AFFILIATION
 KNIGHTON, G. W. Licensing Branch 3

SUBJECT: Identifies equipment required to be seismically qualified
 not identical to previously identified Unit 1 equipment, per
 851007 ltr. & SSER 5. (NUREG-0857) dtd Nov 1983. Equipment
 qualification summary sheets encl.

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NOTES: Standardized plant.

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THE
FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE
WASHINGTON, D. C. 20535

MEMORANDUM FOR THE DIRECTOR

SUBJECT: [Illegible]

[Illegible text follows]

[Illegible text follows]

[Illegible text follows]



Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

October 23, 1985
ANPP-33799-EEVB/BJA

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

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 2
Docket No. STN 50-529
PVNGS Unit 2 Seismic Qualification
File: 85-056-026; G.1.01.10

References: (1) Letter from E. E. Van Brunt, Jr. ANPP, to
G. W. Knighton, NRC, dated October 7, 1985
(ANPP-33671). Subject: PVNGS Unit 2
Equipment Qualification.
(2) NUREG-0857, Supplement No. 5, "Safety
Evaluation Report related to the operation of
Palo Verde Nuclear Generating Station, Units
1, 2, and 3", dated November 1983.

Dear Mr. Knighton:

The purpose of this letter is for ANPP to identify to the NRC staff any PVNGS Unit 2 equipment which is required to be seismically qualified that is not identical to the previously identified PVNGS Unit 1 equipment. ANPP has identified two items of PVNGS Unit 2 equipment in the seismic qualification program that are not identical to the PVNGS Unit 1 equipment. These items of equipment are as follows:

- 1) Valcor Solenoid Valves (Model No. V-526-5631-9):
These valves are located in the auxiliary pressurizer spray lines and were previously identified in Reference (1). These solenoid valves are fully seismically qualified as part of the qualification program described in the EQ summary sheet of Reference (1).
(also attached)
- 2) ITT Barton Pressure Transmitters (Model No. 763):
These are two pressurizer pressure transmitters (PT-103 and PT-104) which provide interlock actuation for the shutdown cooling system isolation valves. PVNGS Unit 1 currently has Rosemount pressure transmitters in this

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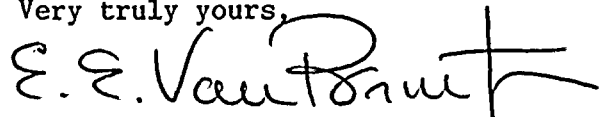
Mr. George W. Knighton, Chief
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application until the first refueling outage, at which time the Rosemounts will be replaced with Bartons (refer to PVNGS FSAR section 1.9.2.4.11). These Barton pressure transmitters are fully seismically and environmentally qualified (refer to the attached EQ summary sheet).

Please note that the ITT Barton Pressure Transmitters are additional items of equipment which are required to be environmentally qualified that were not previously identified in Reference (1).

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/ds

Attachment

cc: E. A. Licitra
R. P. Zimmerman
A. C. Gehr
M. C. Ley
H. Garg

ATTACHMENT:

EQUIPMENT QUALIFICATION SUMMARY SHEETS

ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 2

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT (a)	ENVIRONMENT TO WHICH QUALIFIED	OPERABILITY REQUIREMENT	OPERABILITY DEMONSTRATED	ACCURACY OR RESPONSE TIME REQUIRE- MENT	ACCURACY OR RESPONSE TIME DEMON- STRATED	QUALIFICATION REPORT & METHOD	QUALIFICATION STATUS
Solenoid Process System Valve	Valcor Engineering	System: CVCS	Temperature 370F peak	Temperature 417F peak	Operate for 30 days following DBE after 40 years of normal operation	Operate for 33 days follow- ing DBE after simulated normal opera- tion includ- ing 60,000 cycles by type test and analysis	None	Not Applicable	Type Test and Analysis per: Environmen- tal Qualifi- cation Program 14273-PE- 5733, Rev. 01 Valcor Report SKA 11625, Rev. B.	V526-5631-9 (414150002) qualified for 40 years with preventative maintenance
Containment Building		Model/Tag No. V526-5631-9 (414150002)	Pressure 60 psig peak	Pressure 103 psig peak						Target Rock model 77L003 (CE Mod3) Installed in Unit 1 in lieu of this Valcor Model for Unit 2
		CH-203	Radiation 3.3 x E7 rads/gamma 1 x E8 rads- beta	Radiation 3.7 x E7 rads-gamma 1.1 x E8 rads-beta						
		CH-205	Humidity Stm/Air Mix.	Humidity Stm/Air Mix.						
		Chem. Spray 4400 ppm boron, 50 ppm hydrazine, pH 7-8.5	Chem. Spray 6200 ppm boron, 200 ppm hydrazine ph 7-9							
		Submergence If below plant elev. 90'6"	Submergence Not Appli- cable, installed location above 150 ft. plant elevation							

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PALO VERDE NUCLEAR GENERATING STATION UNIT 2

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Pressure Transmitter	ITT Barton	Model: 763	Temperature 370°F	Temperature 420°F	Post Accident Monitoring 30 Days	100 Days	SDCS +63 psi -78 psi RCS +82 psi -138 psi	SDCS +63 psi -78 psi RCS +82 psi -138 psi	E.Q. Program Document 14273-ICE- 3535	Status: Qualified for 40 Years
C-E Summary Sheet No. 3		System(s): RCS SDCS	Pressure 60 psig	Pressure 75 psig						
Containment Building		CE Tag No: PT-103 PT-104	Relative Humidity Sat. Steam/Air Mixture	Relative Humidity Sat. Steam/Air Mixture					Barton Report R3-763-6 and Addendum	PVNGS Unit 1 has Rosemount 1153 pressure transmitters in this application for first cycle only.
			Radiation 3.3 x E7 rads γ 1.0 x E8 rads β	Radiation 5 x E7 rad γ and 2 x E8 rad β different samples						
			Chemical Spray 4400 ppm boron H ₃ BO ₃ 50 ppm hydrazine ph adjusted to 7.0-8.5 after 4 hours using trisodium phosphate	Chemical Spray 2700 ppm boron H ₃ BO ₃ .064 moles Na ₂ S ₂ O ₃ & NaOH to achieve pH of 10.5 See Note Attached						
			Submergence None	Submergence N/A Above Max Flood Level						

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Solenoid Process System Valve	Valcor Engineering	System: CVCS	Temperature 370F peak	Temperature 417F peak	Operate for 30 days following DBE after 40 years of normal operation	Operate for 33 days follow- ing DBE after simulated normal opera- tion includ- ing 60,000 cycles by type test and analysis	None	Not Applicable	Type Test and Analysis per: Environmen- tal Qualifi- cation Program 14273-PE- 5733, Rev. 01 Valcor Report SKA 11625, Rev. B.	V526-5631-9 (414150002) qualified for 40 years with preventative maintenance Target Rock model 77L003 (CE Mod3) Installed in Unit 1 in lieu of this Valcor Model for Unit 2
Containment Building		Model/Tag No. V526-5631-9 (414150002) CH-203 CH-205	Pressure 60 psig peak	Pressure 103 psig peak						
			Radiation 3.3 x E7 rads/gamma 1 x E8 rads- beta	Radiation 3.7 x E7 rads-gamma 1.1 x E8 rads-beta						
			Humidity Stm/Air Mix.	Humidity Stm/Air Mix.						
			Chem. Spray 4400 ppm boron, 50 ppm hydrazine, ph 7-8.5	Chem. Spray 6200 ppm boron, 200 ppm hydrazine ph 7-9						
			Submergence If below plant elev. 90'6"	Submergence Not Appli- cable, installed location above 150 ft. plant elevation						

September 1985

ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
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			Radiation 3.3 x E7 rads γ 1.0 x E8 rads β	Radiation 5 x E7 rad γ and 2 x E8 rad β different samples						
			Chemical Spray 4400 ppm boron H ₃ BO ₃ 50 ppm hydrazine ph. adjusted to 7.0-8.5 after 4 hours using trisodium phosphate	Chemical Spray 2700 ppm boron H ₃ BO ₃ .064 moles Na ₂ S ₂ O ₃ & NaOH to achieve pH of 10.5 See Note Attached						
			Submergence None	Submergence N/A Above Max Flood Level						

ATTACHMENT TO ENVIRONMENTAL
QUALIFICATION SUMMARY SHEET FOR
BARTON 763 PRESSURE TRANSMITTER (RC-103, 104)

NOTE: Evaluation has been performed by C-E to determine whether the chemical spray solution utilized during the qualification testing would alter the material performance of various materials when compared against the PVNGS containment spray composition. The type of materials considered include stainless steel, nickel-based alloys, copper-based alloys, EPDM, silicon, rubber, phenolics, epoxy materials, low carbon and mild steels, cast irons, and low alloyed steels. As a result of this evaluation, it was concluded that no significant difference in performance for all the listed materials would be expected with respect to demonstrated chemical environment when compared to PVNGS containment spray.

