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 HAYNES, J. G. Arizona Nuclear Power Project (formerly Arizona Public Serv
 RECIPIENT NAME RECIPIENT AFFILIATION
 KNIGHTON, G. W. PWR Project Directorate 7

SUBJECT: Discusses Unit 3 equip qualification (EQ), per App B of
 NUREG-0857, Suppl 5, "SER Re Operation of Palo Verde Nuclear
 Generating Station...." Unit 3 EQ summary sheets &
 mechanical EQ sheets encl.

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Reference is made to the report of the New York Office dated 10/10/54, captioned as above.

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Arizona Nuclear Power Project

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

January 23, 1987
ANPP-39797-JGH/BJA/98.05

Director of Nuclear Reactor Regulation
Attention: Mr. George W. Knighton, Project Director
PWR Project Directorate #7
Division of Pressurized Water Reactor Licensing - B
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530
PVNGS Unit 3 Equipment Qualification
File: 87-G-056-026

Reference: (1) 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:

Appendix B of Reference (1) is a Safety Evaluation Report (SER) on the Environmental Qualification of Electrical Equipment Important to Safety and Safety-Related Mechanical Equipment. This SER requires ANPP to identify all PVNGS Unit 3 equipment that is not identical to the previously identified PVNGS Unit 1 equipment and/or is located in areas in which environmental conditions are more severe than the demonstrated values for PVNGS Unit 1. ANPP has determined that there is no equipment in PVNGS Unit 3 which is located in areas where the environmental conditions are more severe than the demonstrated values for PVNGS Unit 1. Additionally, ANPP has identified several items of PVNGS Unit 3 electrical and mechanical equipment that is not identical to the PVNGS Unit 1 equipment. Attachment 1 of this letter contains Equipment Qualification Summary Sheets for the PVNGS Unit 3 electrical equipment which has been identified as being non-identical to the PVNGS Unit 1 electrical equipment. Attachment 2 of this letter contains Mechanical Equipment Qualification Sheets for the PVNGS Unit 3 mechanical equipment which has been identified as being non-identical to the PVNGS Unit 1 mechanical equipment.

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

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/BJA/rw
Attachments

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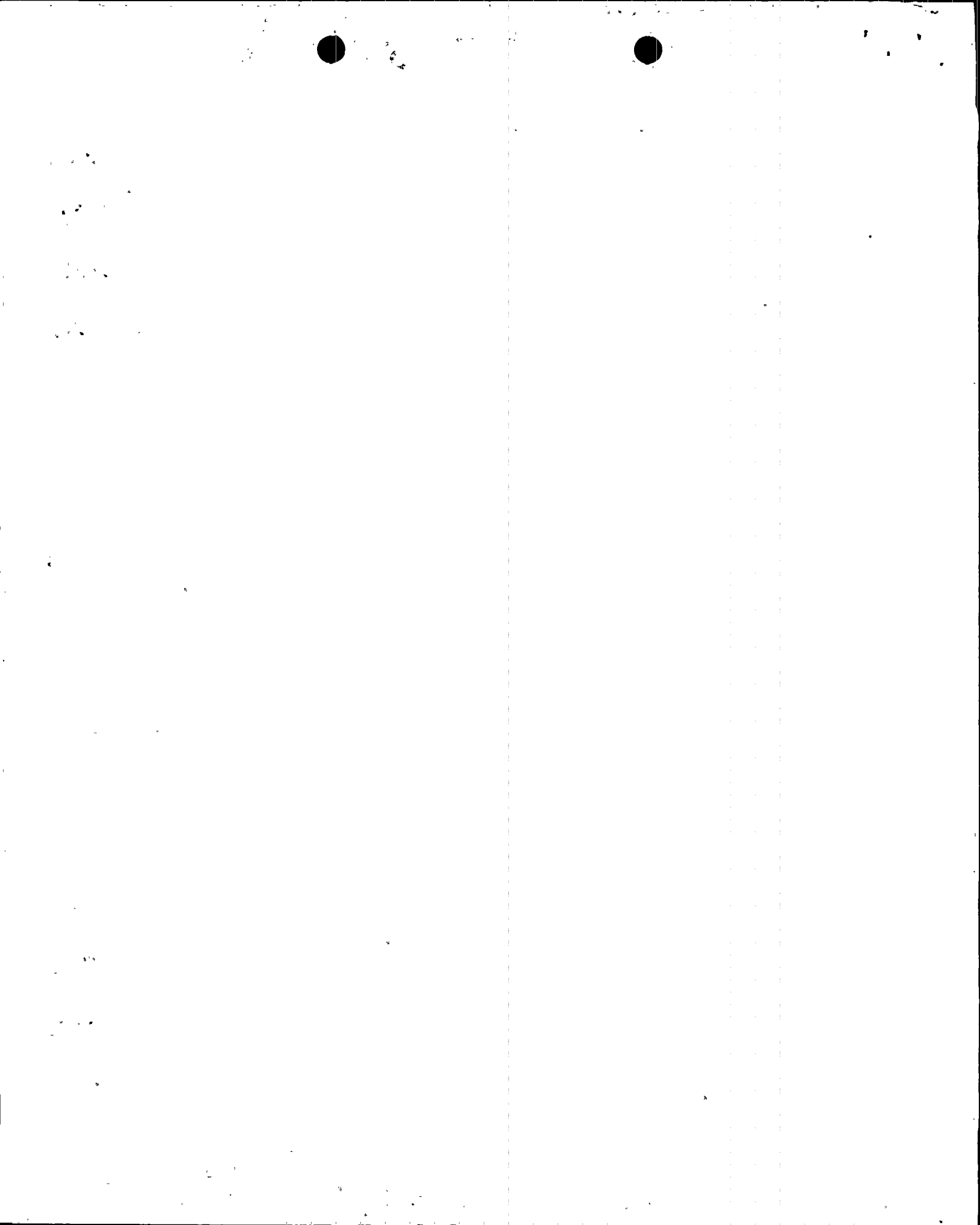


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Mr. George W. Knighton
Subject: PVNGS Unit 3 Equipment Qualification
ANPP- 39797
Page 2

cc: O. M. De Michele (all w/a)
E. E. Van Brunt, Jr.
E. A. Licitra
R. P. Zimmerman
J. B. Martin
A. C. Gehr



Attachment 1

Electrical Equipment Qualification Summary Sheets



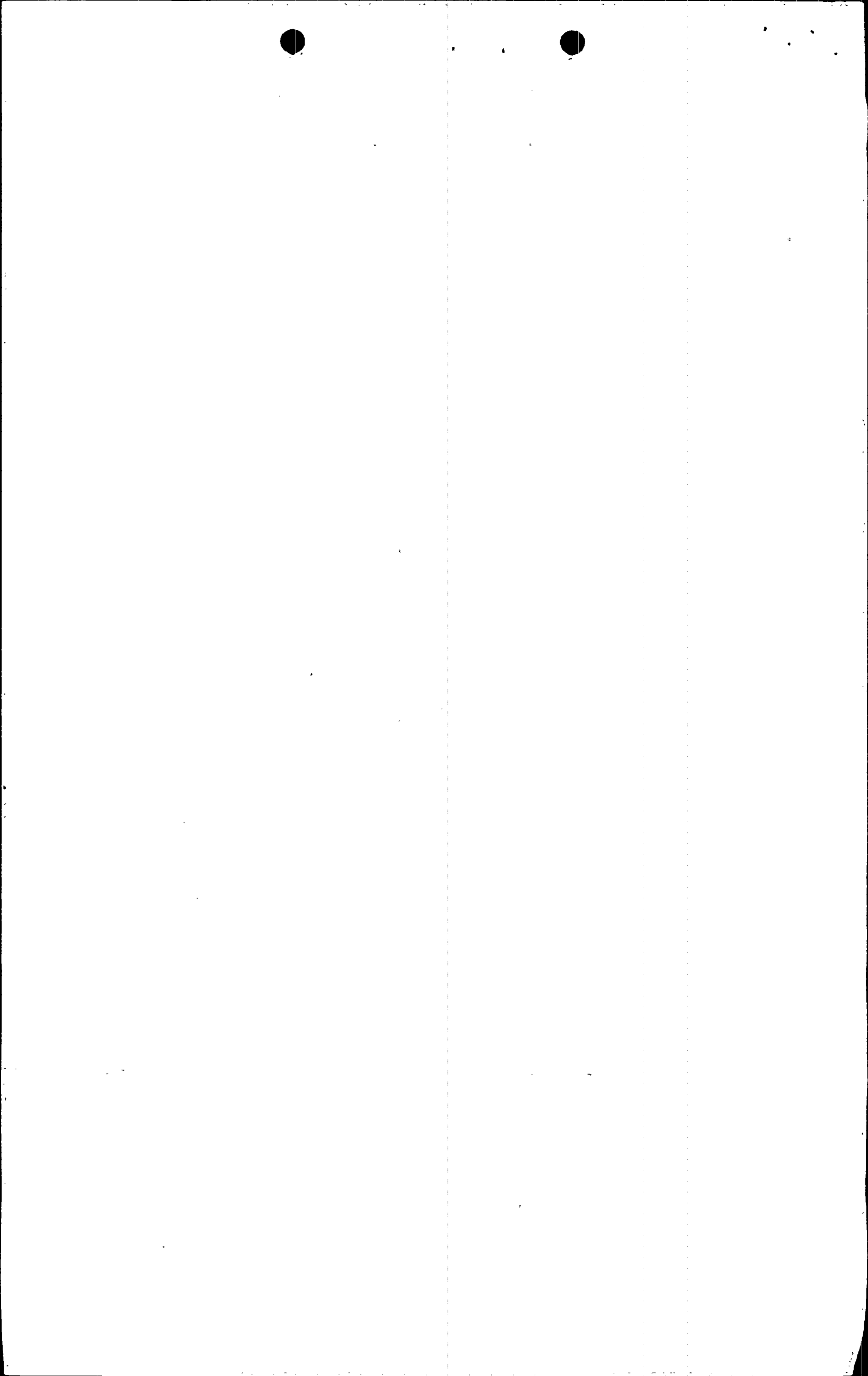
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ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO.. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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 Valve	Target Rock Corp. (P.O. No. 10407-F- 143272-H0)	Model No. 82EE-001	Temperature 50-104°F	Temperature 385°F peak	30 Days	>30 Days	N/A	N/A	BPC Log No. 13-10407- J603-193, 3/22/83 Similarity Analysis to type test of TRC Model 77CC-001 Valve	Qualified for 40 years with parts replacement
Auxiliary Building		System: HVAC Cont. Bldg. J-HCD-HV-77	Pressure Atmospheric	Pressure 66 psig peak						
			Humidity 20-90%	Humidity 91%						
			Radiation 1x10 ⁶ rads gamma	Radiation 3.53x10 ⁷ rads gamma						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Appli- cable						
				Cycling 18,000						

Unit 1 is Target Rock Model 76HH-003, Spec. JM-603.



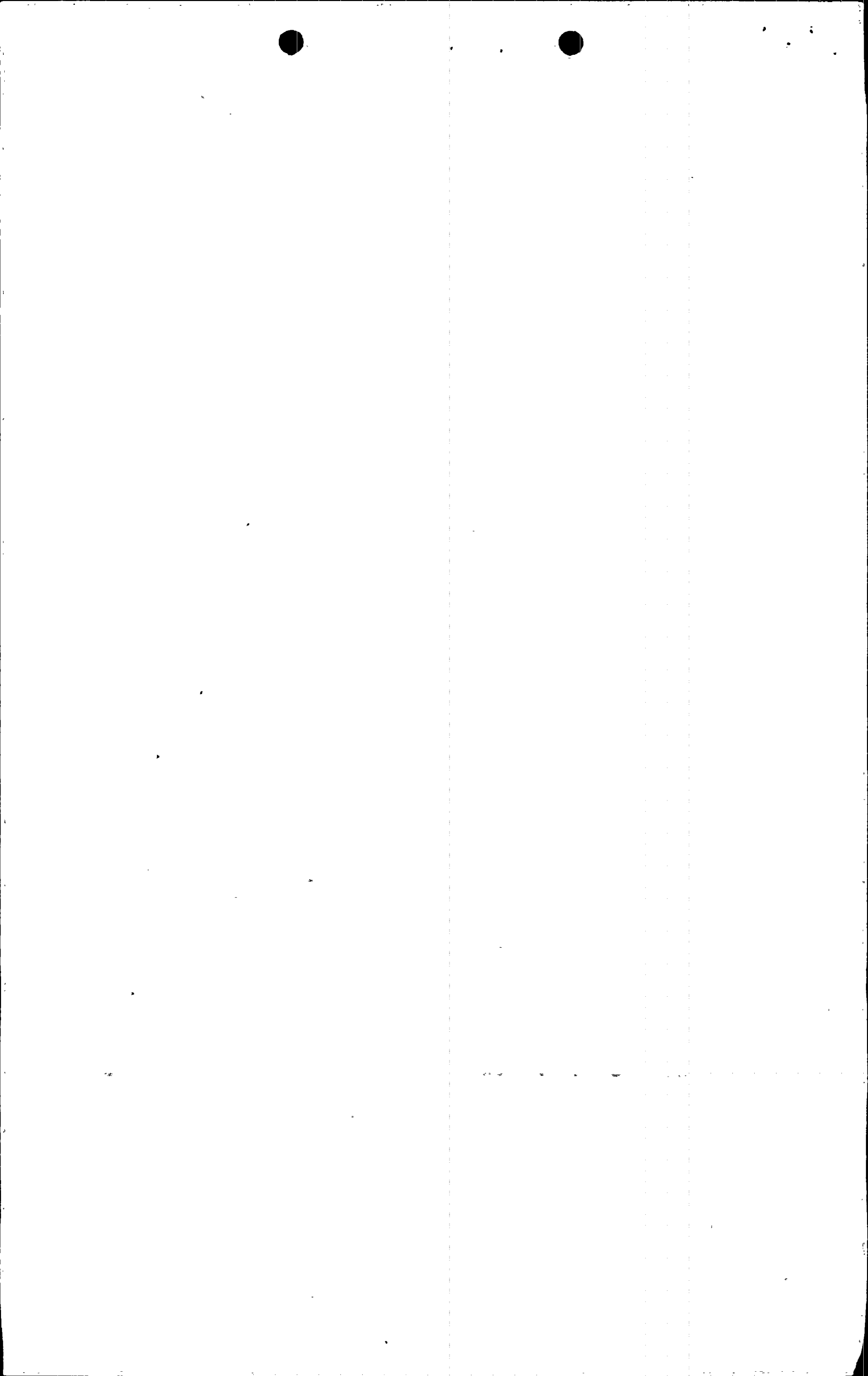
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Solenoid Valves (for pneumatic operated main steam and feed water isolation gate valves) HSSS above el. 100 ft.	Automatic Switch Co. (ASCO) (P.O. 13-PM-221B) Anchor/Darling Valve Co.	Model No. NP8321A7E	Temperature 28-120°F	Temperature 346°F peak	Remain operable for 30 days following DBE after 40 years of normal operation.	Close & remain closed for 30 days (720 hours) following DBE after simulated 40 yrs of normal operation and including 40,000 cycles by type test and analyses.	N/A	N/A	Type Test and analysis per ASCO Report AQS 21678/TR Rev. A	Qualified for 40 years with maintenance
		Tag Nos. J-SGB-UY-130 & J-SGB-UY-135	Pressure Atmospheric	Pressure 110 psig peak						
		Model No. NP8321A5E	Humidity 20-90%	Humidity Steam/Air Mixture						
		Tag Nos. J-SGA-UY-172 & J-SGA-UY-175	Radiation 1x10 ⁶ rads gamma	Radiation 2.0x10 ⁸ rads gamma						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Applicable						

* Model No. NP8321A5E is qualified with Report No. E1563, Rev. D, Bechtel Log No. PM-221B-440 (Reference to ASCO Report AQS-21678/TR, Rev. A).

* Model No. NP8321A7E is listed on ASCO Report AQS-21678/TR, Rev. A.

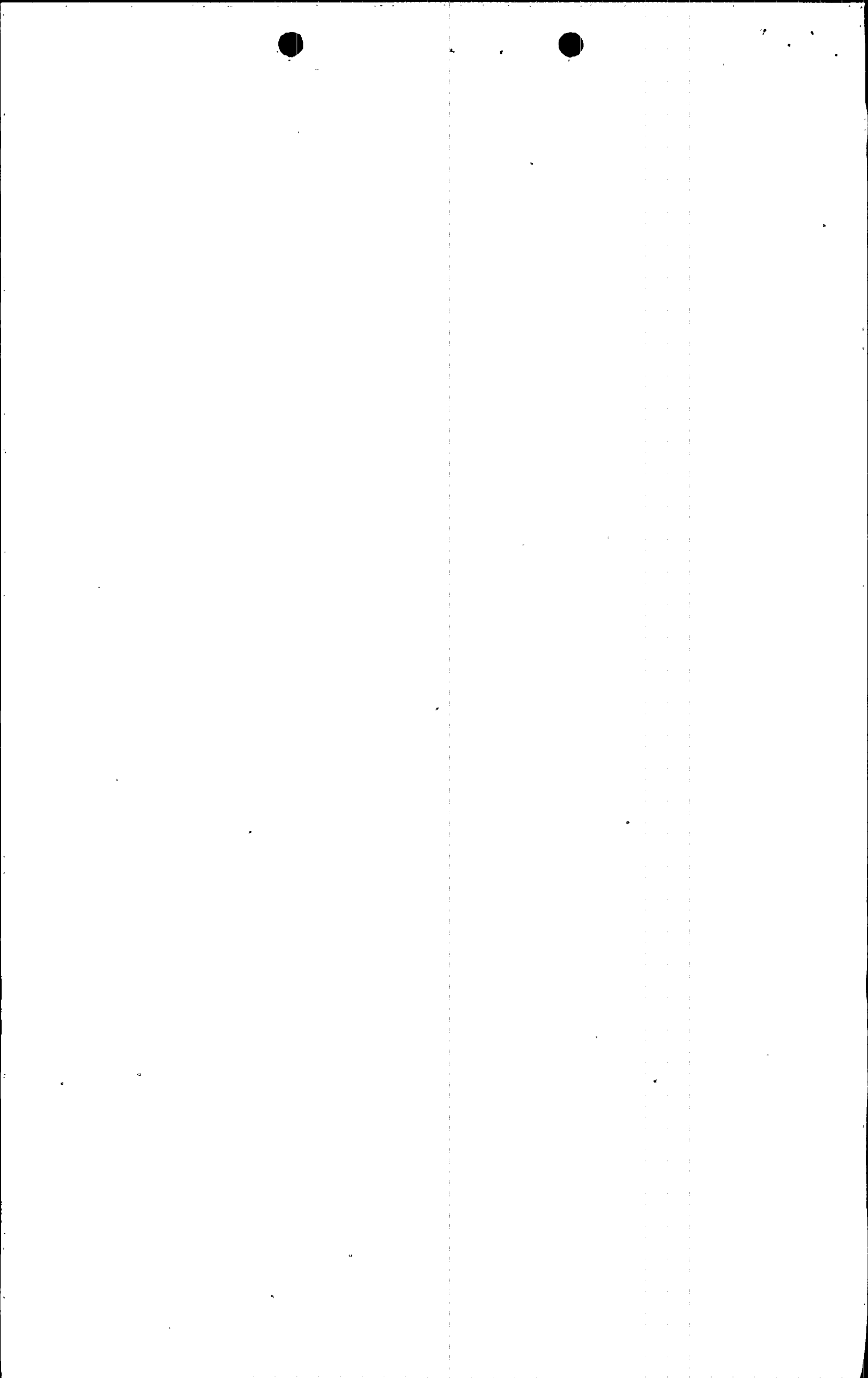
* See Note (1)



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

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Solenoid Valves	Valcor (NSSS)	Model No. V-526-5631-9	Temperature 370°F peak	Temperature 417F peak	Operate for 30 days following DBE after 40 years of normal operation.	Operate for 33 days following DBE after simulated normal operation including 60,000 cycles by type test and analysis.	N/A	N/A	Type Test and Analysis per: Environmental Qualification Program 14273-PE-5733, Rev. 01	V526-5631-9 (414150002) qualified for 40 years with preventative maintenance		
Containment Building		Tag Nos. J-CHA-HV-205 J-CHB-HV-203	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

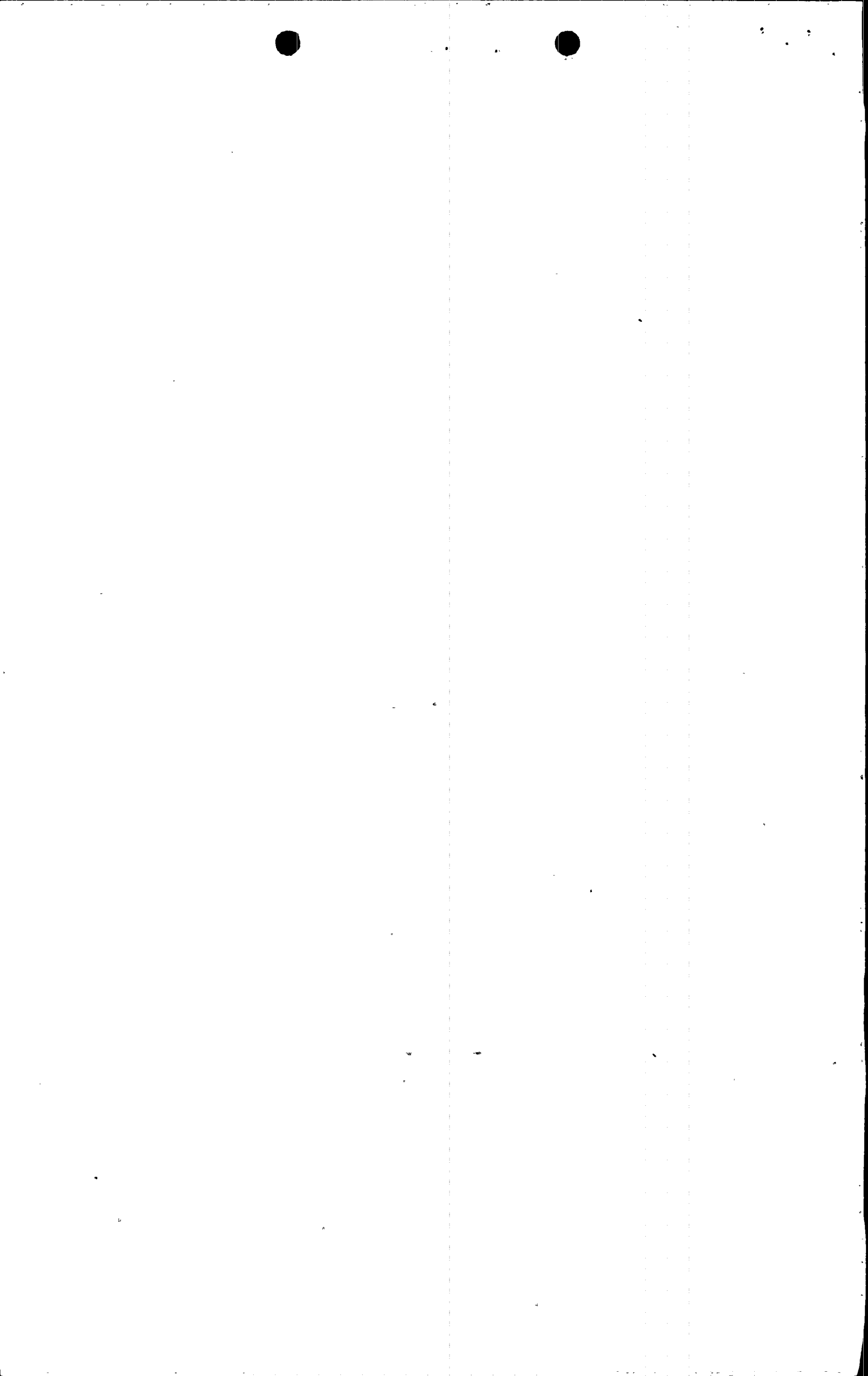
Unit 1 has Target Rock 771-003.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Valve Actuator	Limitorque (NSSS)	Model No. SMB-000-5	Temperature 104°F	Temperature 250°F	30 Days	33 Days	N/A	N/A	Type test and analysis per Limitorque Report B0058 C-E Program 14273-PE- 5731	Qualified for 40 years with preventative maintenance
Auxiliary Building		Tag Nos. J-SIA-HV-657 J-SIB-HV-658 J-SIA-HV-678 J-SIB-HV-679	Pressure Atmospheric	Pressure 25 psig						
			Radiation 1x10 ⁶ rads gamma	Radiation 2x10 ⁷ rads gamma						
			Humidity 90% RH	Humidity 100% RH						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Appli- cable						

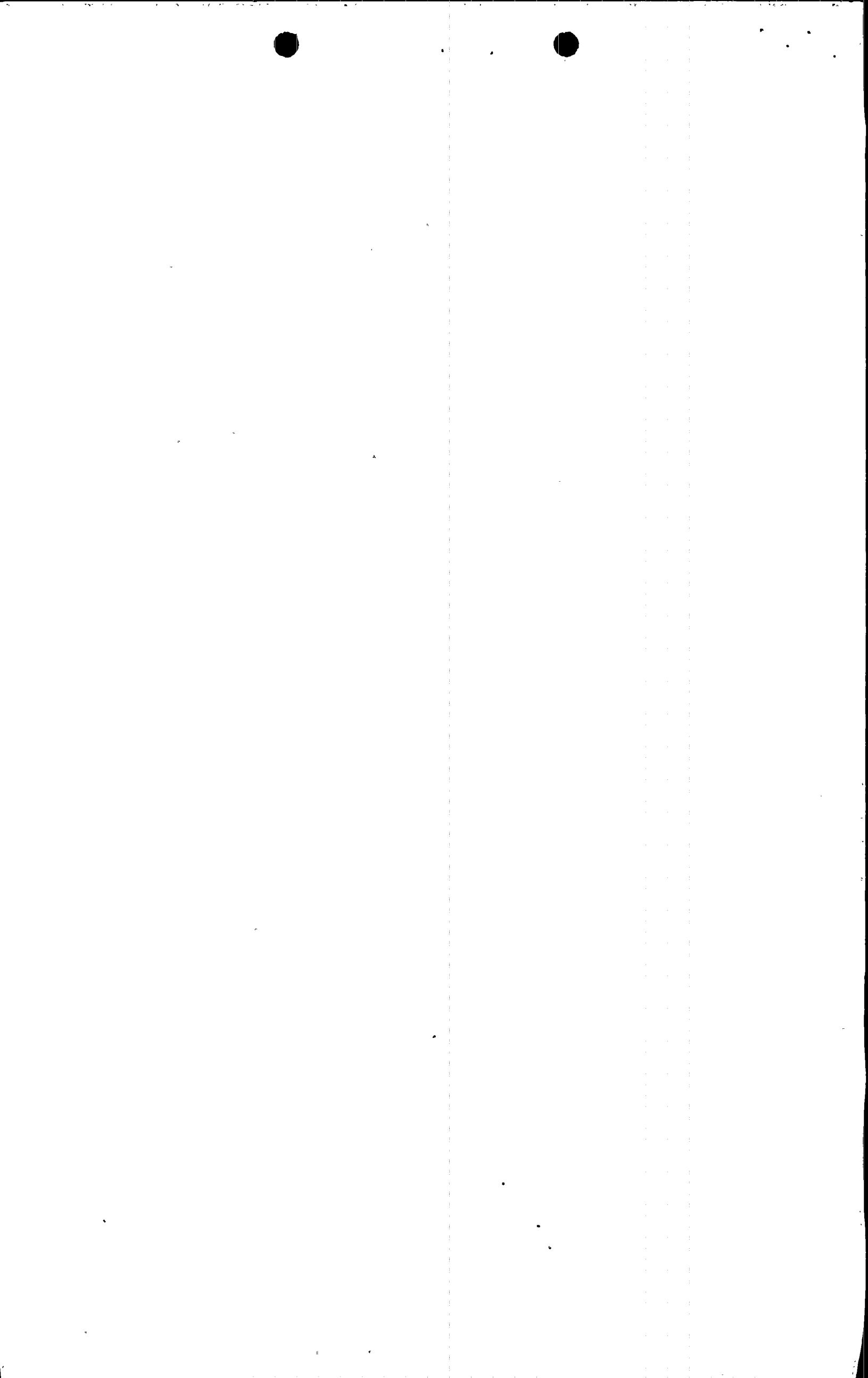
EQR has Limitorque SB-000-5. Unit 1 as-built is Limitorque SMB-000-5.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Level Transmitter (Pressure)	ITT Barton (NSSS)	Model No. 764	Temperature 370°F	Temperature 420°F	Post-Accident Monitoring 60 days for LT-311, LT- 321, LT-331, LT-341	100 Days	Post- Accident Monitor- ing +22% for LT-311, LT-321, LT-331, LT-341.	Post- Accident Monitor- ing +17% -7% for LT-311, LT-321, LT-331, LT-341.	E.Q. Program Document 14273-ICE- 3535	Qualified for 40 years.
Containment Building		Tag Nos. J-SIB-LT-311 J-SIB-LT-321 J-SIA-LT-331 J-SIA-LT-341 J-SGA-LT-1113A J-SGB-LT-1113B J-SGC-LT-1113C J-SGD-LT-1113D J-SGA-LT-1123A J-SGB-LT-1123B J-SGC-LT-1123C J-SGD-LT-1123D J-SGA-LT-1114A J-SGB-LT-1114B J-SGC-LT-1114C J-SGD-LT-1114D J-SGA-LT-1124A J-SGB-LT-1124B J-SGC-LT-1124C J-SGD-LT-1124D	Pressure 60 psig Relative Humidity Sat. Steam/ Air Mixture Radiation 3.3x10 ⁷ rads 1.0x10 ⁸ rads Chemical Spray 4400 ppm Boron H ₃ BO ₃ , 50 ppm Hydrazine pH adjusted to 7.0-8.5 after 4 hrs using Tri- sodium phos- phate Submergence None	Pressure 75 psig Relative Humidity Sat. Steam/ Air Mixture Radiation 5x10 ⁷ rads 2.10 ⁸ rads diff samples Chemical Spray 2700 ppm Boron H ₃ BO ₃ , 0.64 moles NaOH to achieve pH of 10.5 Submergence N/A						

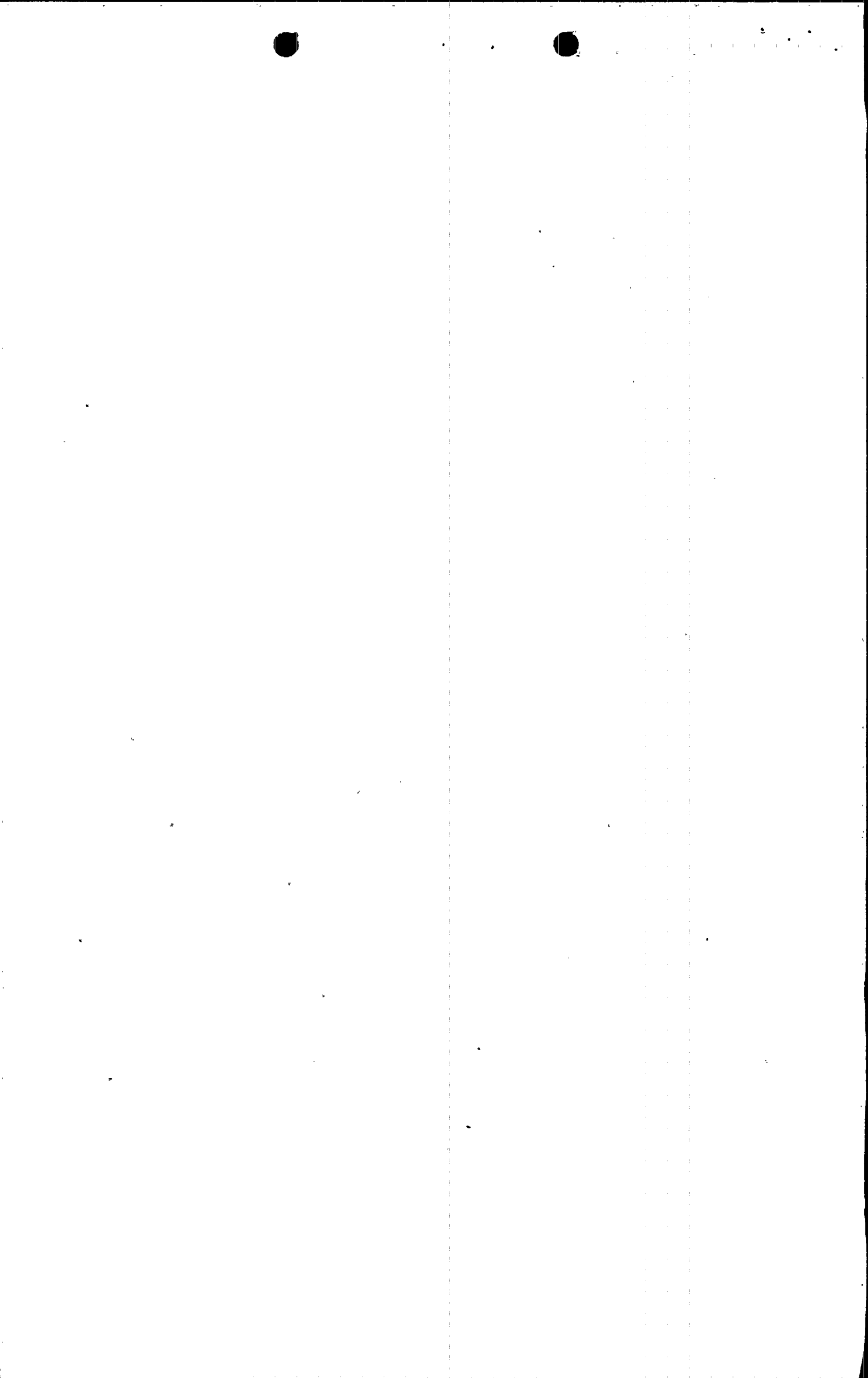
EQR has ITT Barton Model 763. Unit 1 as-built is ITT Barton Model 764.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Valve Actuator	Limatorque (NSSS)	Model No. SMB-00-5	Temperature 104°F	Temperature 250°F	Operate for 30 days fol- lowing DBE after 40 yrs of normal operation.	Remain oper- able for 33 days follow- ing DBE after simulated 40 years of nor- mal operation including 2,000 cycles by type test and analysis.	N/A	N/A	Type test and analysis per Limatorque Report B0058 C-E Program 14273-PE- 5731	Qualified for 40 years with preventative maintenance.
Auxiliary Building		Tag Nos. J-CHA-HV-524 J-CHB-HV-255	Pressure Atmospheric	Pressure 25 psig						
			Radiation 1x10 ⁶ rads gamma	Radiation 2x10 ⁷ rads gamma						
			Humidity 90% RH	Humidity 100% RH						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Appli- cable						

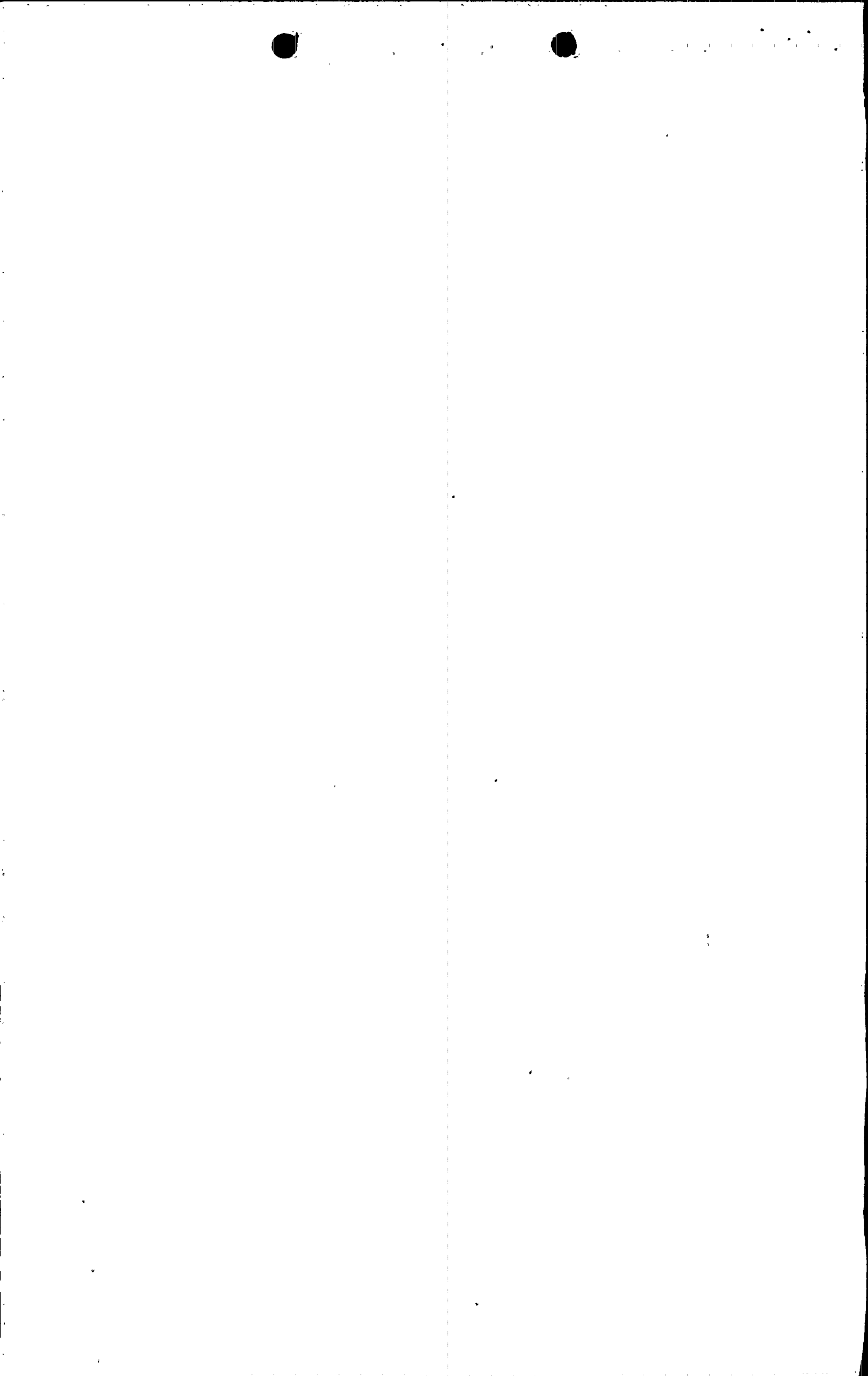
EQR has Limatorque SMB-00-15. Unit 1 has Limatorque SMB-00-5.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO., OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Flow Transmitter (Pressure)	Rosemount (NSSS)	Model No. 1152DP3	Temperature 50-104°F	Temperature 230°F	30 days	30 days	Post-Accident Accuracy + 10%	+2.0%	ECE-SI-A009 M234A-86-1 E600-36-3 (Rosemount Report 117415 Rev. C)	Replace trans- mitter at 6.5 years.
Auxiliary Building		System: PAMS	Pressure 0 psig	Pressure 6 psig						
		Tag Nos. J-SIA-FT-308 J-SIB-FT-309	Humidity 20-90% RH	Humidity 100%						
			Radiation 1x10 ⁶ rads gamma	Radiation 5x10 ⁶ rads gamma						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Appli- cable						

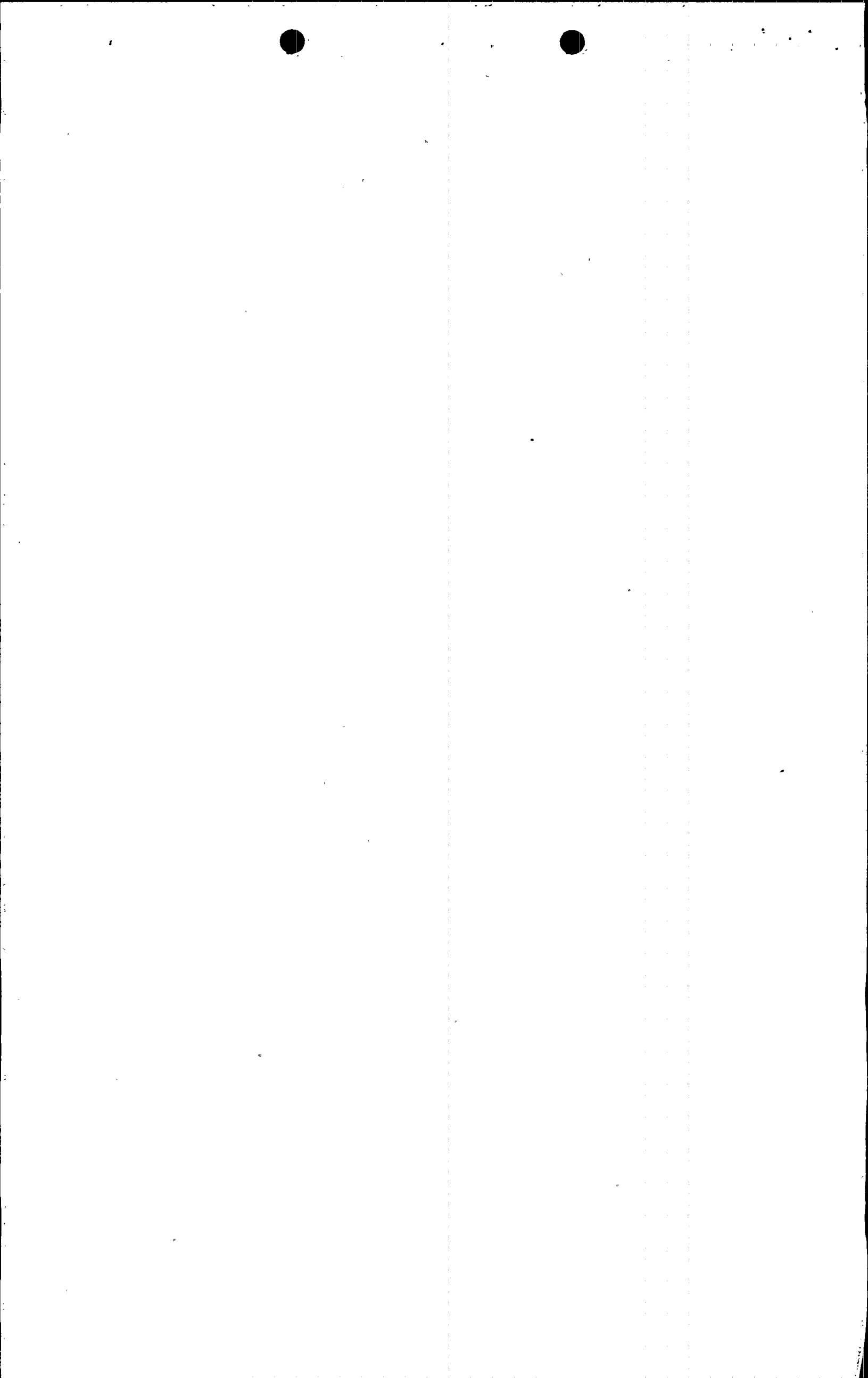
EQR has Rosemount Model 1153B. Unit 1 as-built is Rosemount Model 1152DP3.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Valve Actuator	Valcor (NSSS)	Model No. 526-5683-7	Temperature 104°F peak	Temperature 385°F peak	Operate for 30 days following DBE, after 40 years of normal oper- ation.	Operate for 33 days follow- ing DBE after simulated normal oper- ation follow- ing 60,000 cycles by type test and analysis.	N/A	N/A	Type Test per 14273-PE- 5733	Qualified to 10 years with maintenance
Auxiliary Building		Tag Nos. J-SGB-HV-200 J-SGB-HV-201	Pressure Atmospheric	Pressure 66 psig						
			Radiation 1x10 ⁶ rads gamma	Radiation 3.5x10 ⁷ rads 1.1x10 ⁸ rads						
			Humidity 90% RH	Humidity Steam/Air Mixture						
			Chemical Spray None	Chemical Spray 4400 ppm Boron as H ₃ BO ₃ , 50 ppm Hydra- zine pH=7.0- 8.5						
		Submergence None	Submergence Not Appli- cable							

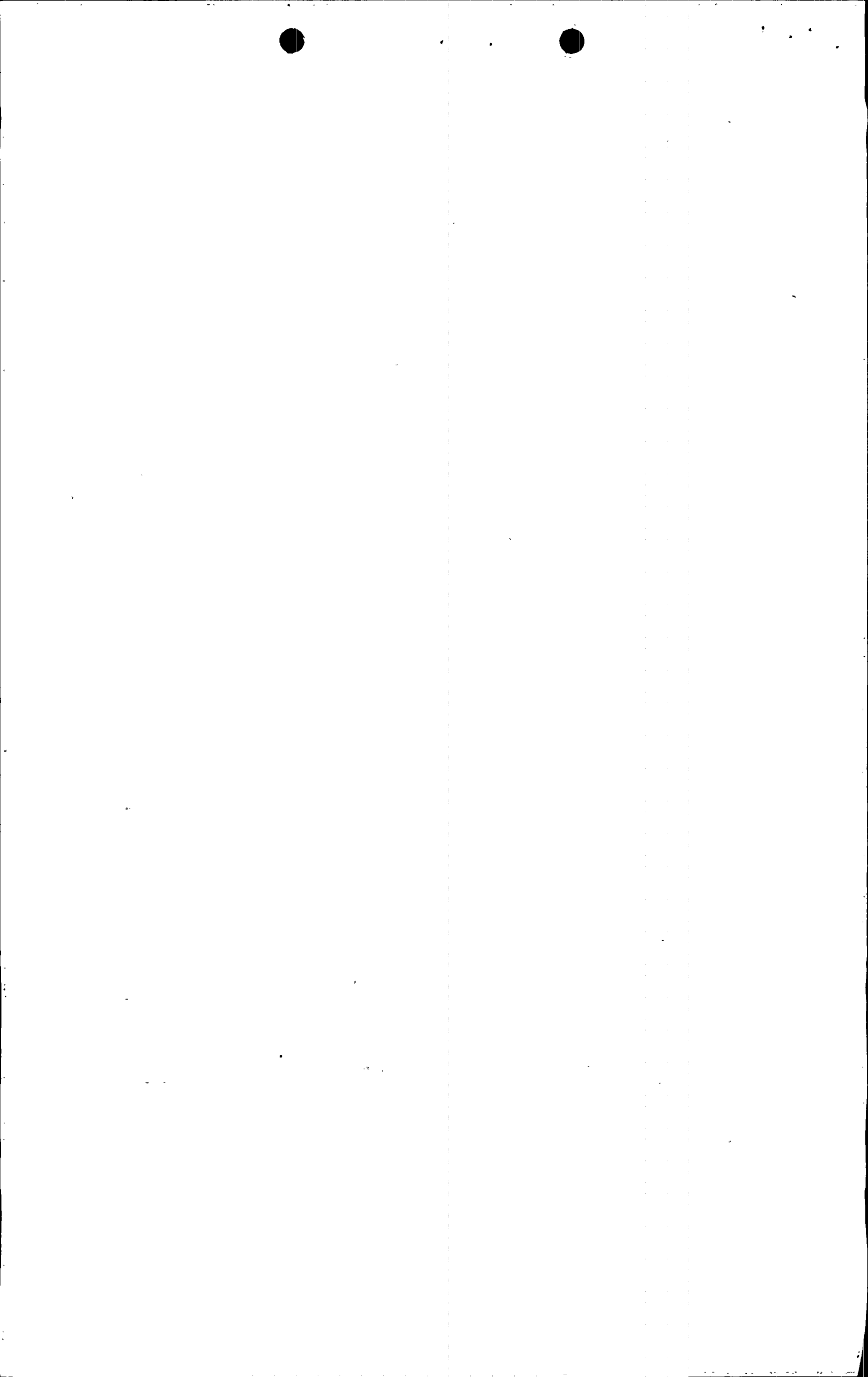
EQR has Valcor Model 526-5683-6. Unit 1 as-built is 526-5683-7.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Limit Switch	ASCO (NSSS)	Model No. NP8321A5E	Temperature 104°F	Temperature 450°F peak	Remain oper- able for 30 days fol- lowing DBE after 40 years of normal oper- ation.	Close & remain closed or operate for 33 days (792 hours) fol- lowing DBE after simula- ted 40 years of normal op- eration and including 40,000 cycles by type test and analysis.	N/A	N/A	Type Test & analysis per ASCO Reports AQS-21678/TR Rev. A; AGR- 67368 Rev. 0 C-E Program 14273-PE- 5734, Rev. 0 C-E Letter V-PAK-250	Qualified for 40 years with preventative maintenance
Auxiliary Building		Tag No. J-CHA-UY-580	Pressure Atmospheric	Pressure 78 psig peak						
			Radiation 1x10 ⁶ rads gamma	Radiation 1.82x10 ⁸ rads 1.1x10 ⁸ rads						
			Humidity 90% RH	Humidity Steam/Air Mixture						
			Chemical Spray None	Chemical Spray Not Applicable						
			Submergence None	Submergence Not Appli- cable						

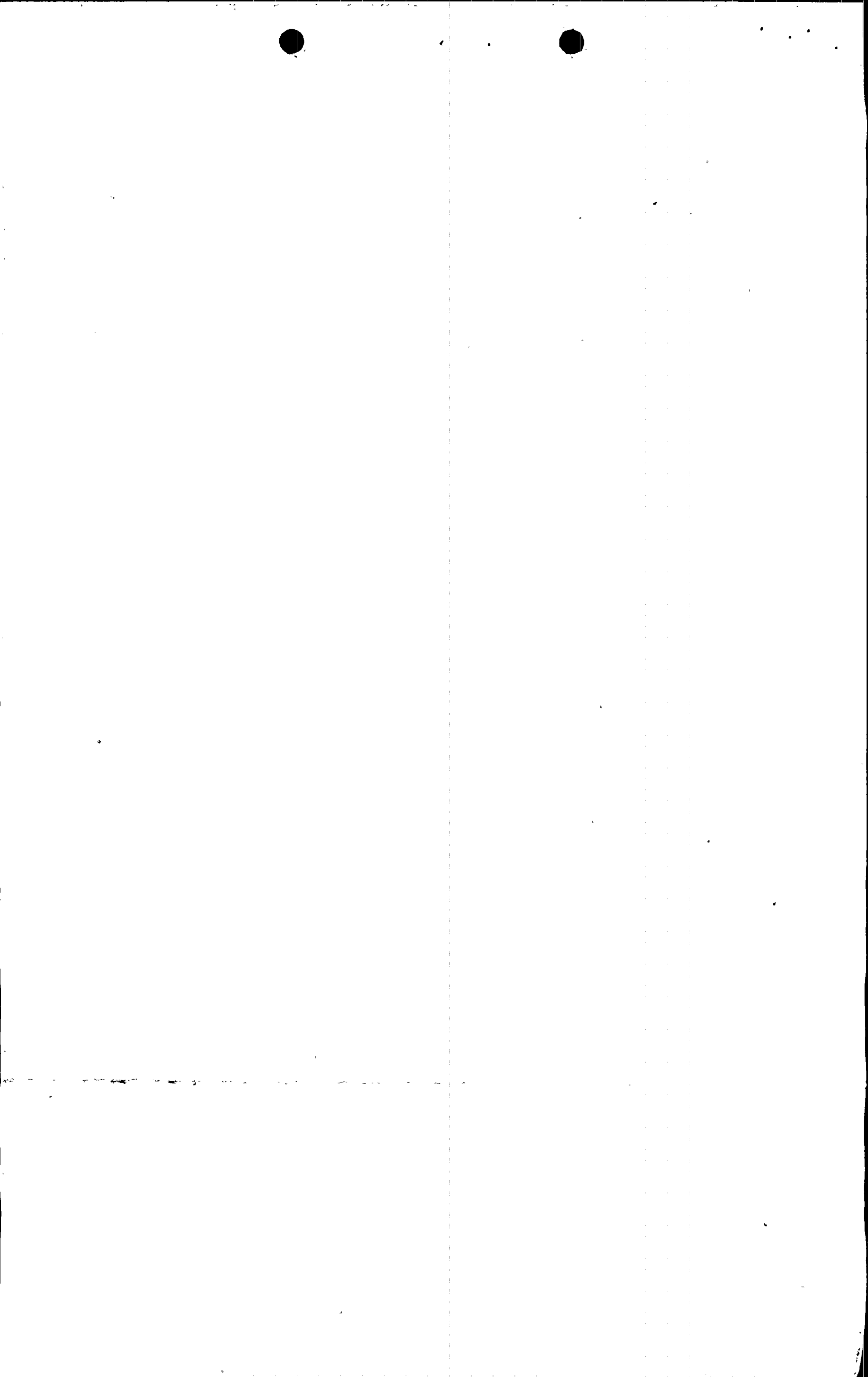
EQR has ASCO Model NP8321A1E. Unit 1 as-built is ASCO Model NP8321A5E.



ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Motor Oper- ated Valve Actuator	Limatorque (NSSS)	Model No. SMB-00-7.5	Temperature 104°F	Temperature 250°F	Operate for 30 days fol- lowing DBE after 40 yrs normal oper- ation.	Remain oper- able for 33 days follow- ing DBE after simulated 40 years of nor- mal operation including 2,000 cycles by type test and analysis.	N/A	N/A	Type Test and analysis per Limatorque Report B0058	Qualified for 40 years with preventive maintenance.
Auxiliary Building		Tag No. J-CHE-HV-536	Pressure Atmospheric	Pressure 25 psig						
			Rel. Humidity 90%	Rel. Humidity 100%						
			Radiation 1x10 ⁶ rads γ	Radiation 2x10 ⁷ rads γ						
			Chemical Spray None	Chemical Spray N/A						
			Submergence N/A	Submergence N/A						

EQR has Model SMB-00-15 (Letter 30476, Table 4.1-2, page 2 of 35).
Walkdown identified model as SMB-00-7.5.

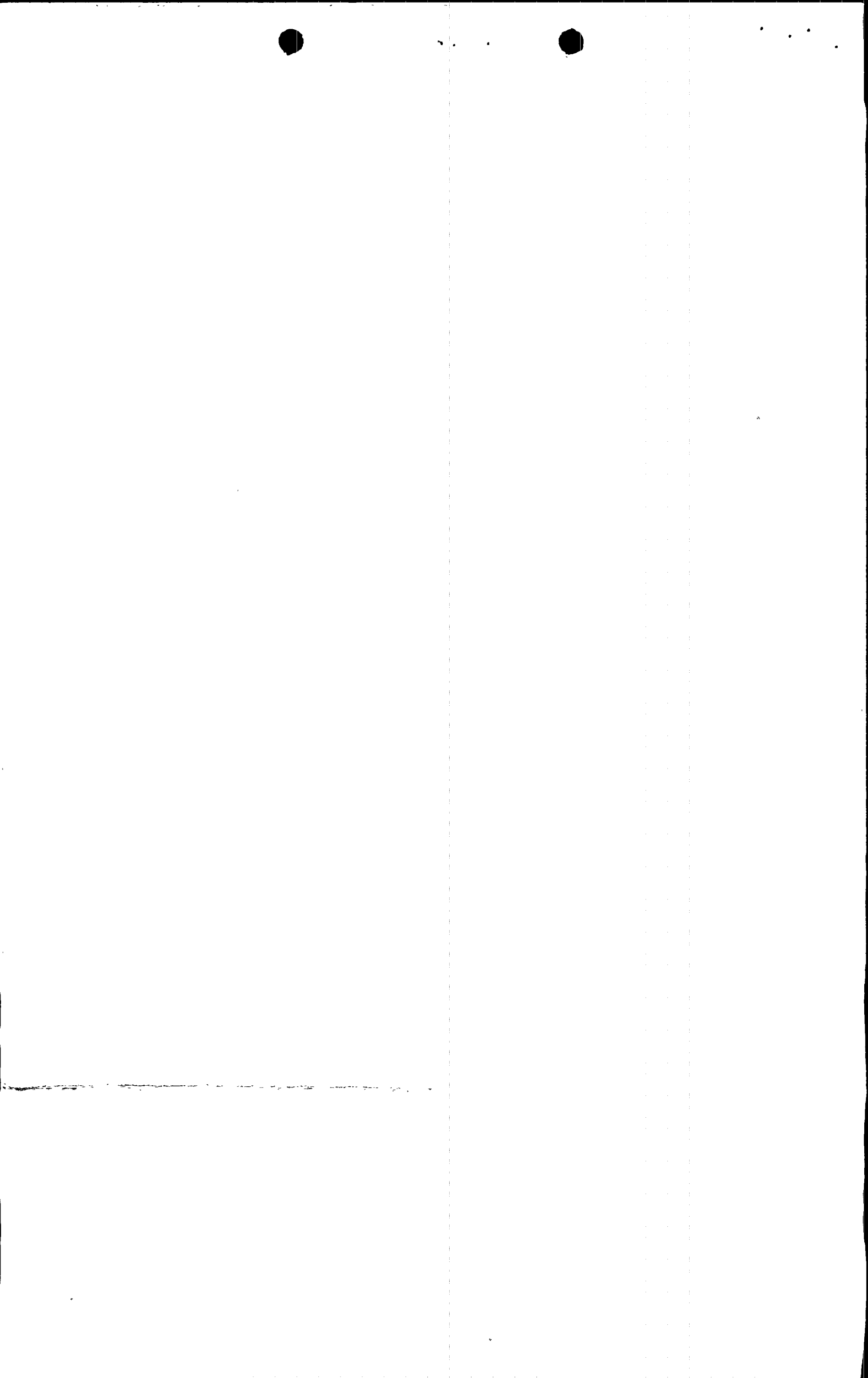


ENVIRONMENTAL QUALIFICATION OF IE ELECTRICAL EQUIPMENT
PALO VERDE NUCLEAR GENERATING STATION UNIT 3

TYPE OF EQUIPMENT/ LOCATION	MANUFACTURER	MODEL NO. OR IDENTI- FICATION	ABNORMAL OR ACCIDENT ENVIRONMENT	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
Alternating Current Electric Motor Oper- ators	Borg-Warner (P.O. 10407- F-178606)	Limatorque Model No. SMC-04-7-1/2 Tag No. J-HPB- UV-6	Temperature 104°F	Temperature 250°F	Required to close auto- matically upon receipt of a con- tainment isolation alarm signal	16 days	None	N/A	Environmental Qualified by ECE #HP-A003 Seismic Qualified by ECE #HP-A004 and Limi- torque re- port B0003.	40 years with maintenance.
Auxiliary Building			Pressure Atmospheric	Pressure 25 psig						
			Radiation 1x10 ⁶ rads gamma	Radiation 2.0x10 ⁷ rads gamma						
			Humidity 90%	Humidity 100%						
			Chemical Spray None	Chemical Spray N/A						
			Submergence N/A	Submergence N/A						

* Valve was replaced via NCR #PX9931. This valve was spared. The replacement valve (as listed above) was procured from WPPSS with P.O. F-17866, Item 2 (WPPSS Tag No. NPS-2SI-VQ019).

Unit 1 is Dresser Model 5500W, with Rotork Actuator Model 7NAB1-43.



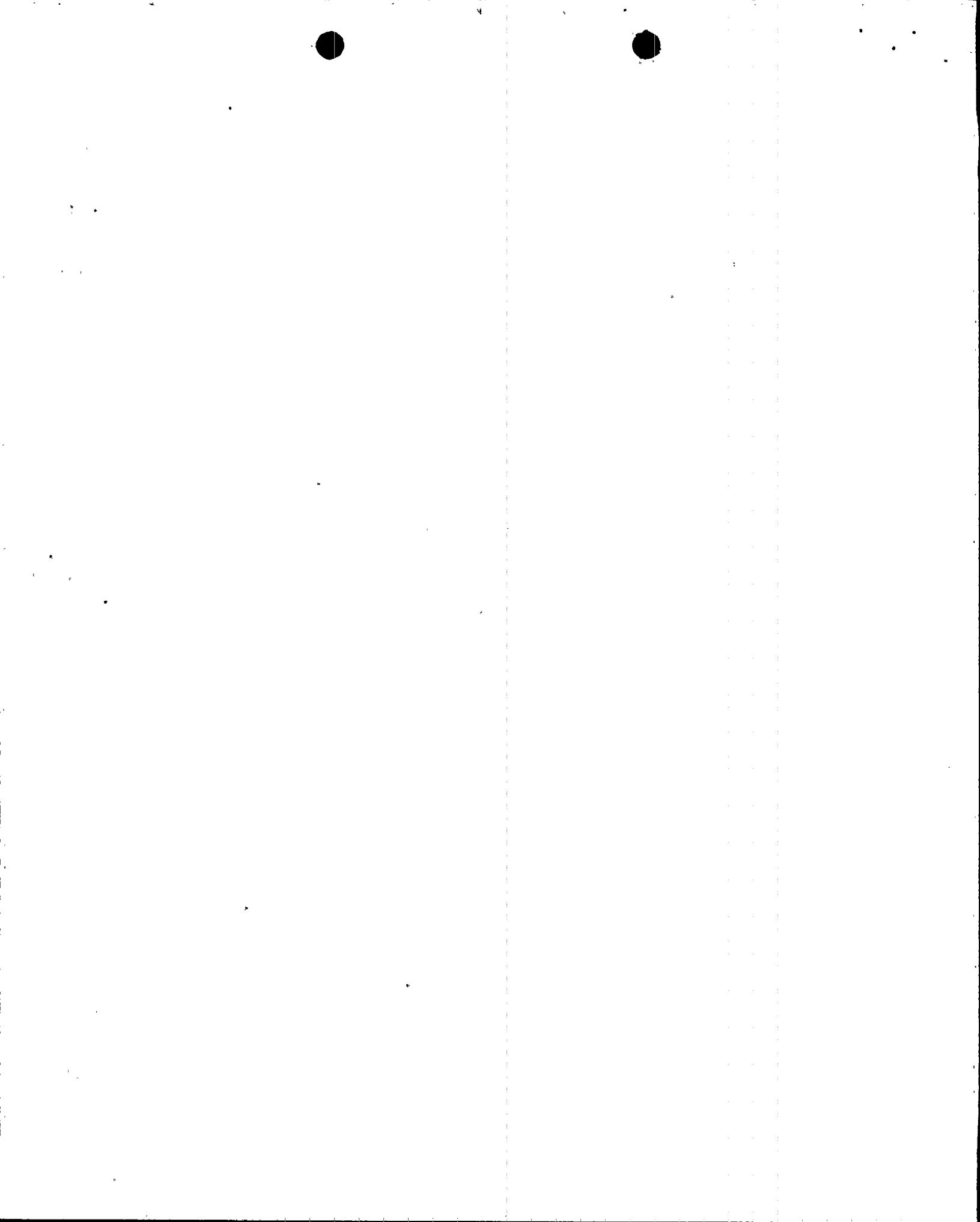
Attachment 2

Mechanical Equipment Qualification Sheets



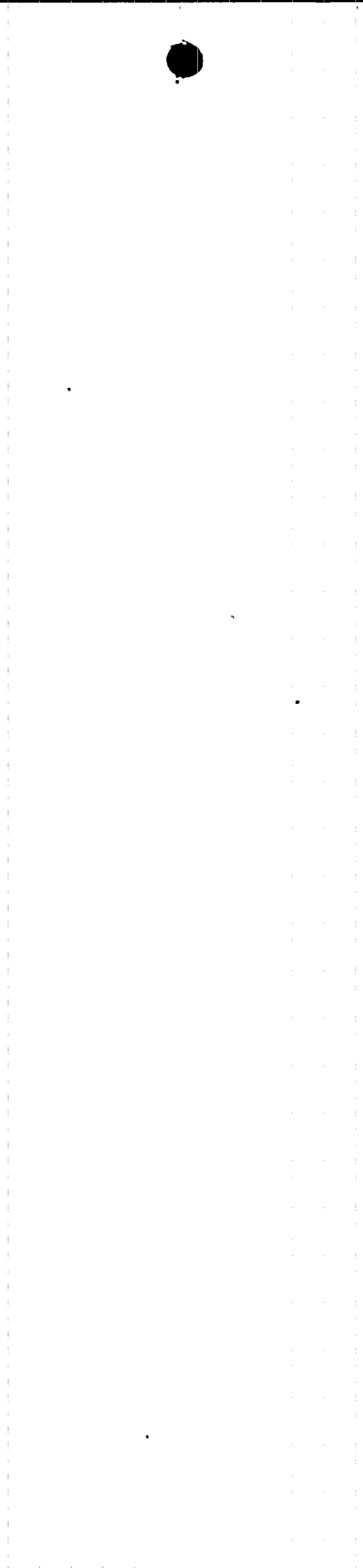
MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-MM-598	Dampers Ruskin Mfg. Co.	CDR-92B	M-HAA-M214 M-HAB-M215 M-HAA-M216 M-HAB-M217	ZCAE (MSSS)	Wyle No. 58551	CDR-92



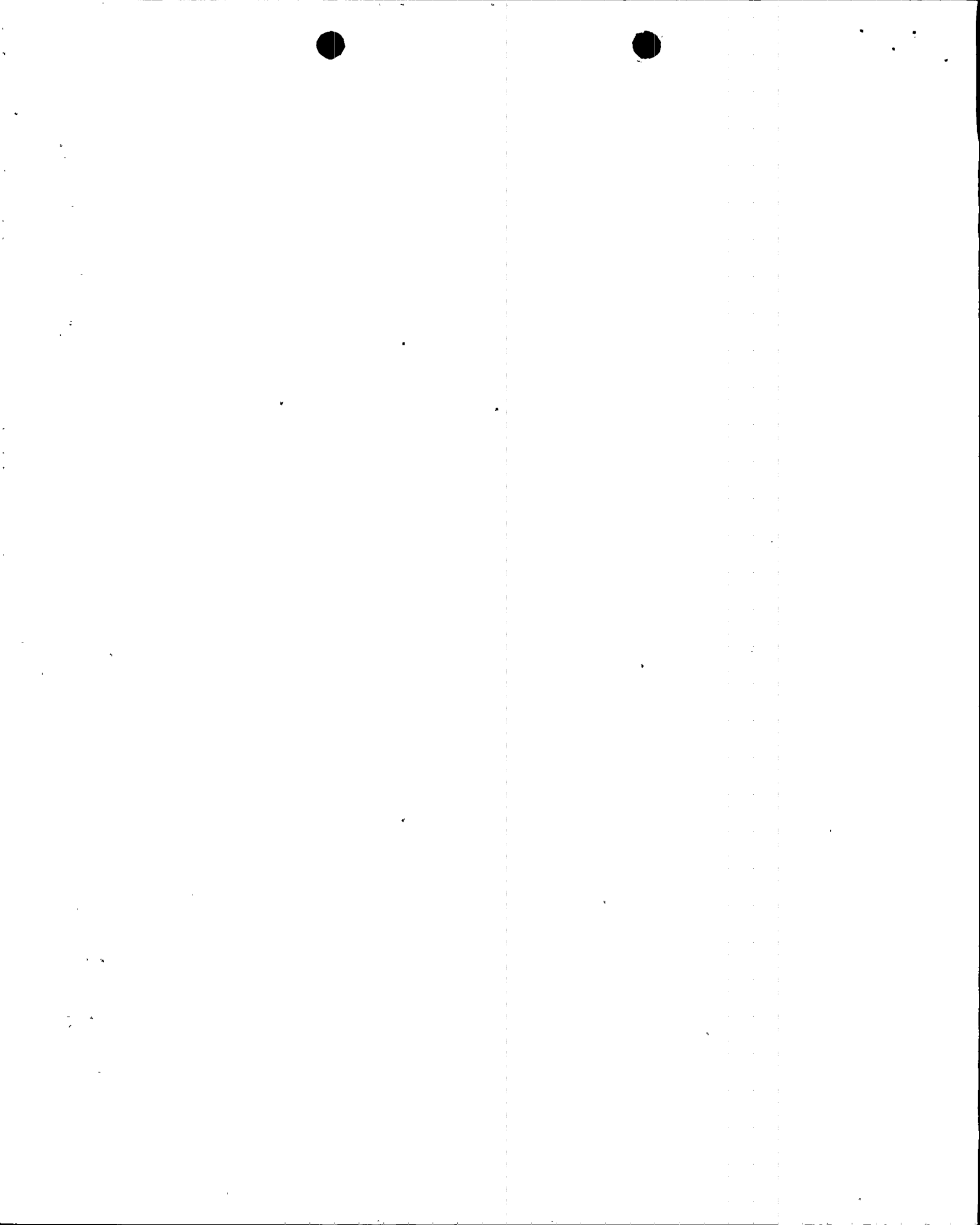
MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-MM-721A	Air Handling Unit <hr/> (American Air Filter)	H6LPACYA	M-HAA-Z02	ZACC	NES 26410 <hr/> AAF No. NESE-358, Rev. 9	Model No. H9LPACYA



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-MM-721A	Air Handling Units <hr/> (American Air Filter)	H9LPACYA	M-HAB-Z01 M-HAB-Z03	ZACD	NES 26410 <hr/> AAF No. NESE-358, Rev. 9	Model No. H6LPACYA



MECHANICAL EQUIPMENT QUALIFICATION SHEET

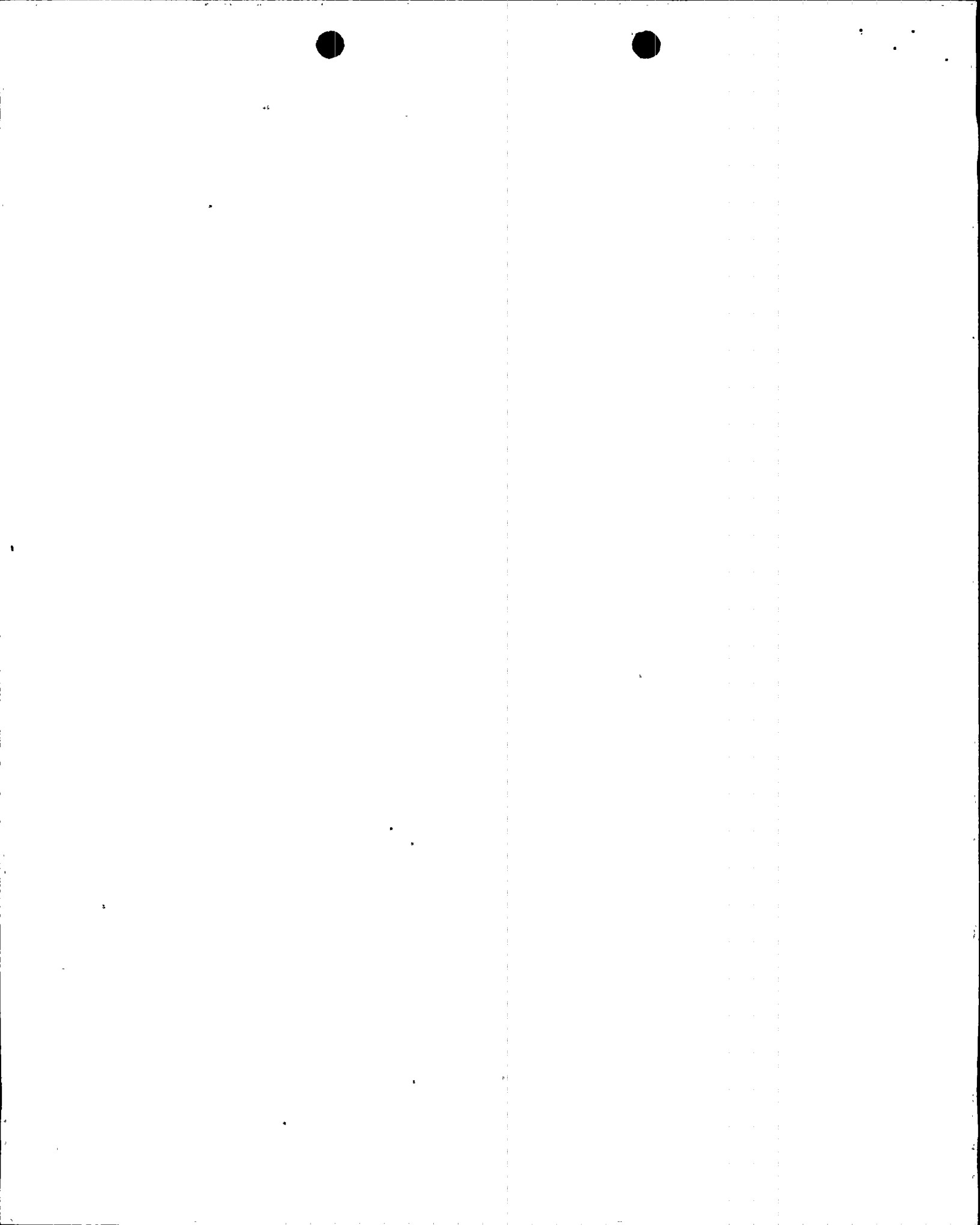
SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-NM-001	Valve	Borg-Warner 106FCB3004	J-SIB-UV- 646 J-SIA-UV- 627	ZA	NSR 106FCB3004 <hr/> Qualification Report was submitted for review and components will be qualified prior to fuel load for Unit 3. <hr/>	Borg-Warner Model No. 77620-2



MECHANICAL EQUIPMENT QUALIFICATION SHEET

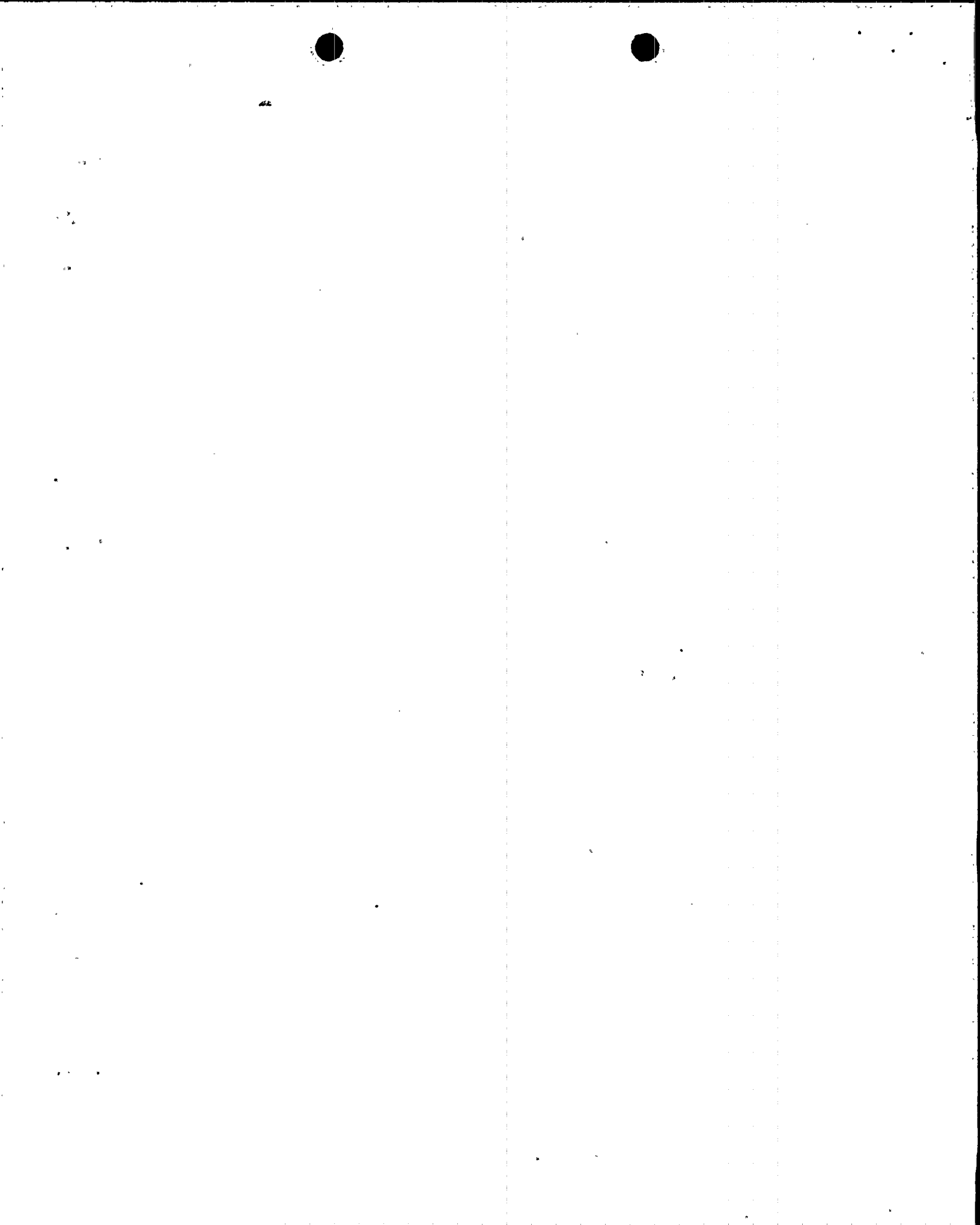
SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-NM-001 (WPPSS/Anchor Darling) P.O. F-187606/1	Anchor Darling Valve Co.	4053-3	J-SIA-IV- 684	ZA	NXX2-11.04- 20	NIA* procurement for Unit 3. Unit 1 Manuf/Model No. Borg Warner/77780

* Non-Traditional Acquisition



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-NM-001	Borg Warner Valve	77710-1	P-CHA-V118 P-CHA-V190	ZAI1	NSR 77710-1 (N001-7.09- 369) for Seismic	Model No. 77710 Note: The difference in the two models is in the casting.



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
P221A (Dresser)	Nuclear Service Valves 2" and smaller	1", Mark No. 115, Quality Class Q1B	3PHPAV035	ZA	P221A-123	Unit 1 has Dresser Mark No. 374.
		.37", 306, Q1B	3PSSEV802 and 804	ZC ZC	P221A-206	Unit 1 has 1" size Dresser Mark 306.
		.75", 329, Q1B	3PRCEV874 875, 876	ZC	P221A-119	Unit 1 has Mark No. 329, under P221C/Kerotest.
			3PSIAV956 3PSIBV954	ZA	P221A-119	Unit 1 has Mark No. G under NM001/B-W.
			3PSIBV967 3PSIAB966	ZA	P221A-119	Unit 1 has Mark No. 329, under P221C/Kerotest.
P221A (WPPSS- Borg-Warner) P.O. F- 176952/3	Nuclear Service Valves 2" and smaller	2", 374, Q1C	3PECBV062	ZJ	PXX1-164	NTA* procurement for Unit 3 under P.O. F176952/3. Unit 1 has Mark No. 374, 1.50" under P221A/ Dresser.
P221A (WPPSS- Dresser) P.O. F- 185169/1	Nuclear Service Valves 2" and smaller	.75", 313, Q1C	3PSGEV365	ZM	PXX1-189	NTA* procurement for Unit 3 under P.O. F185169/1. Unit 1 has Mark No. 329, 1" size/Dresser.

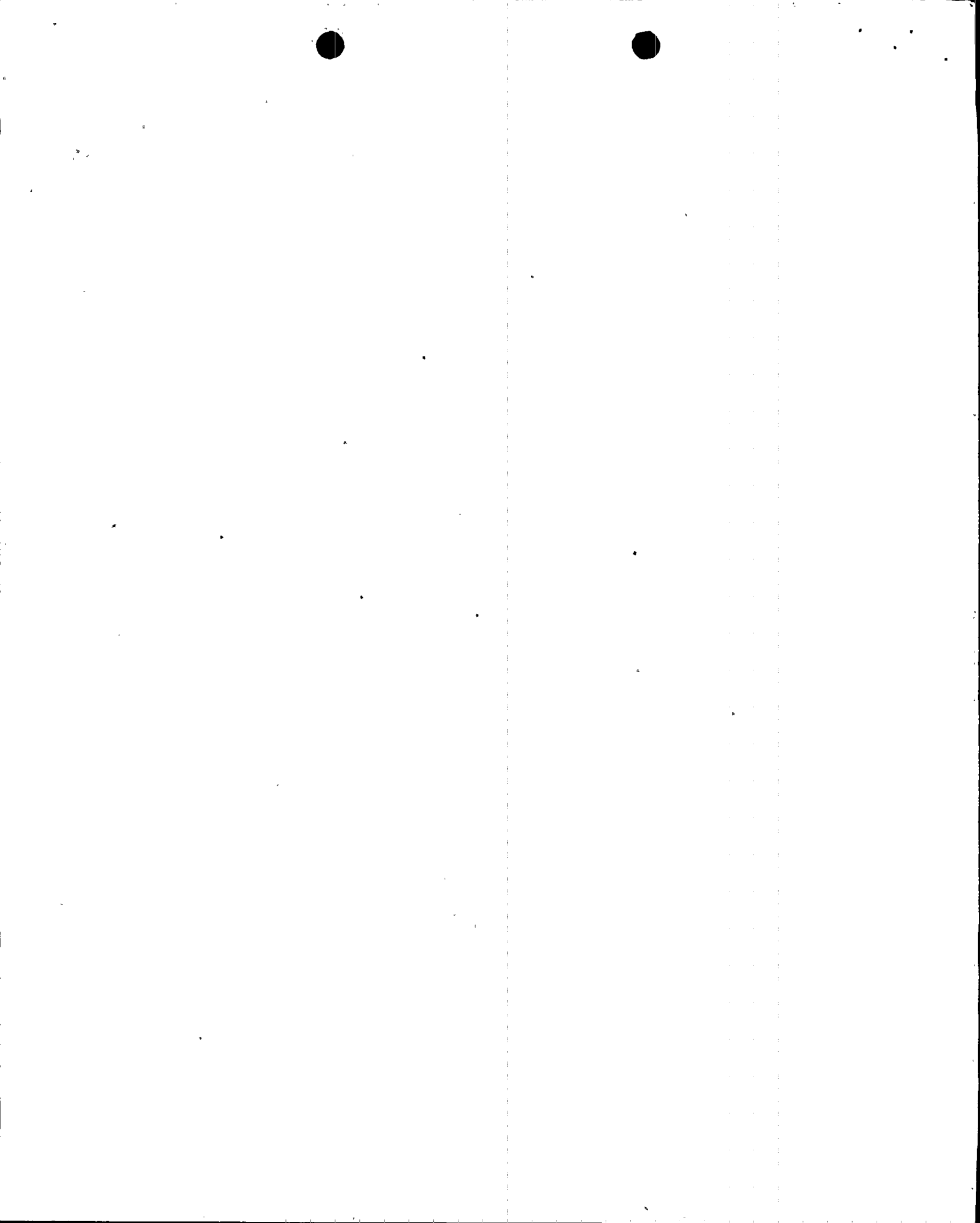
* Non-Traditional Acquisition



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
P221B (Anchor Darling)	Nuclear Service 2-1/2" and larger valves	4", 211, Q1C	3PCTEV009	ZY	P221B-374	Unit 1 is 6" Mark 211/ Anchor Darling
		4", 211, Q1B	3PPCEV081	ZC	P221B-374	Unit 1 valve is 3", Mark No. 211 under P221B/ Anchor Darling
		3", 212, Q1C	3PRDAV050 3PRDBV052	ZA ZA	P221B-373	Unit 1 valve is 4", Mark No. 212 under P221B/ Anchor Darling
		8", 606, Q1B	3PSGEV693	ZM	P221B-389	Unit 1 has similar valve under P221B/Anchor Darling
P221B (WPPSS- Hirata) P.O. F-176952/1		3", 430, Q1B	3PCHEVX47	ZY	PXX1-162	Unit 3 NTA* procurement under P.O. F176952/1 Unit 1 is under P221B/ Anchor Darling
P221B (WPPSS- Hirata) P.O. F-176950/2		6", 430, Q1B	3PCHEV011	ZY	PXX1-182	Unit 3 NTA* procurement under P.O. F176950/2 Unit 1 is under P221B/ Anchor Darling
P221B (WPPSS- Hirata) P.O. F-176950/3		3", 441, Q1C	3PEMBV024	ZA	PXX1-181	Unit 3 NTA* procurement under P.O. F176950/3 Unit 1 under P221B/ Anchor Darling

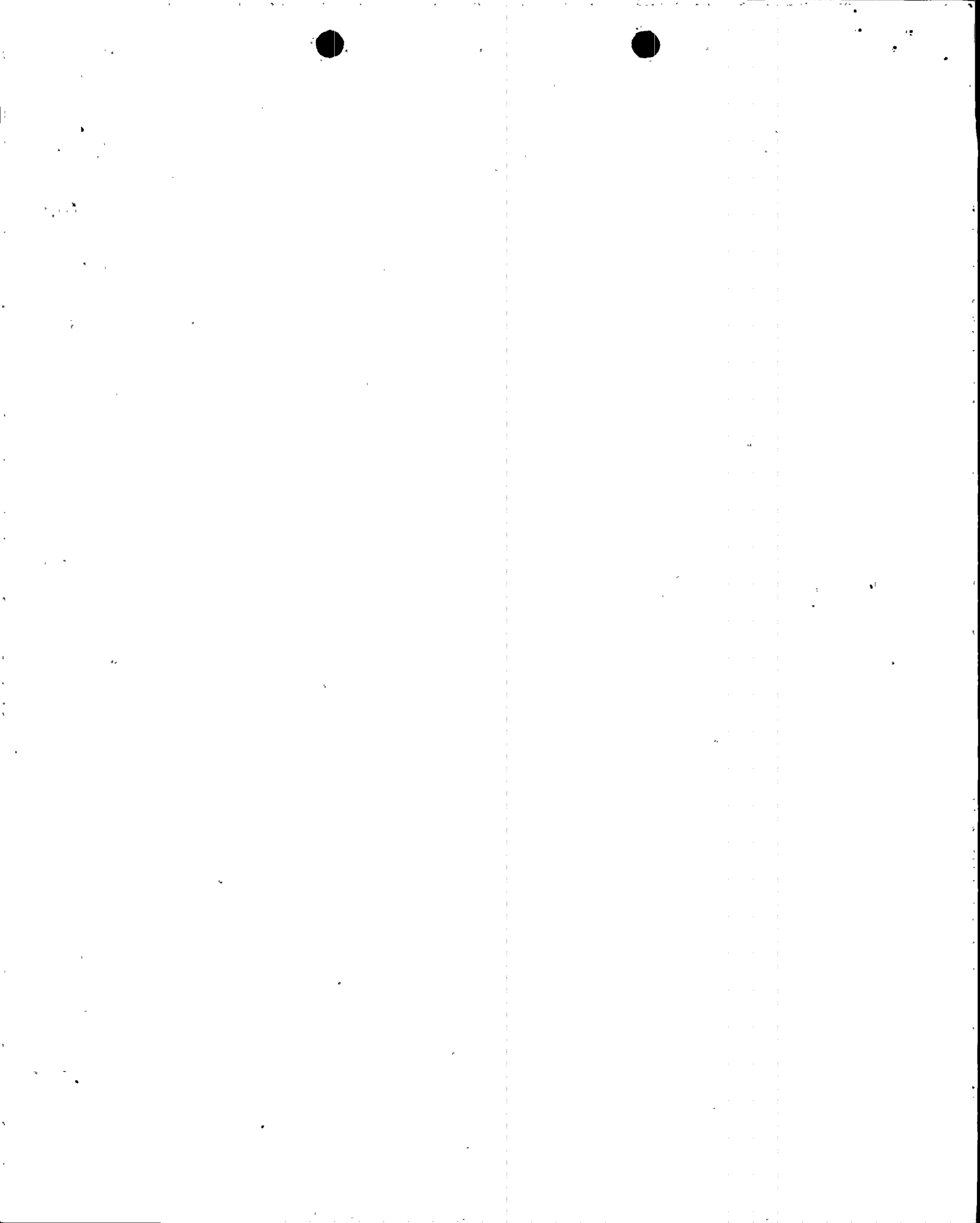
* Non-Traditional Acquisition



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1	
P221C (Kerotest)	Nuclear Service Valve, 3" and smaller	.50", Mark No. 306 Quality Class Q1A	3PSIEV129	ZC	P221C-72	Unit 1 valve under NM001/Borg-Warner	
			3PSSEV014	ZC	P221C-72	Unit 1 valve under P221C, 1" size/Kerotest	
			3PSSEV016	ZC	P221C-72	Unit 1 valve under P221A, 1" size/Dresser	
			3PSSEV017	ZC	P221C-72	Unit 1 valve under P221A, 1" size/Dresser	
		.50", 374, Q1B	3PSIEV863	ZA	P221C-72	Unit 1 valve under P221A/Dresser	
		2", 374, Q1B	3PCHNV934	ZA	P221C-29	Unit 1 valve under P221A/Dresser	
		1", 378, Q1B, Q1C	Various	Various	P221C-35	Unit 1 valve under P221A/Dresser	
		1", 609, Q1C	3PSGEV334	Various	339, 348	P221C-71	Unit 1 used Mark No. 619 under P221A/Dresser
					350, 357		
					358, 360		
			3PSGEV346	ZM	P221C-71	Unit 1 used Mark No. 313, 3/4", NTA* valve (WPPSS/Dresser) P.O. F-185169/1	
	1", 634, Q1B	3PGAEV015	ZC	Qualification Report was submitted for review and components will be qualified prior to fuel load for Unit 3.	Unit 1 valve under P221A/Dresser		

* Non-Traditional Acquisition



MECHANICAL EQUIPMENT QUALIFICATION SHEET

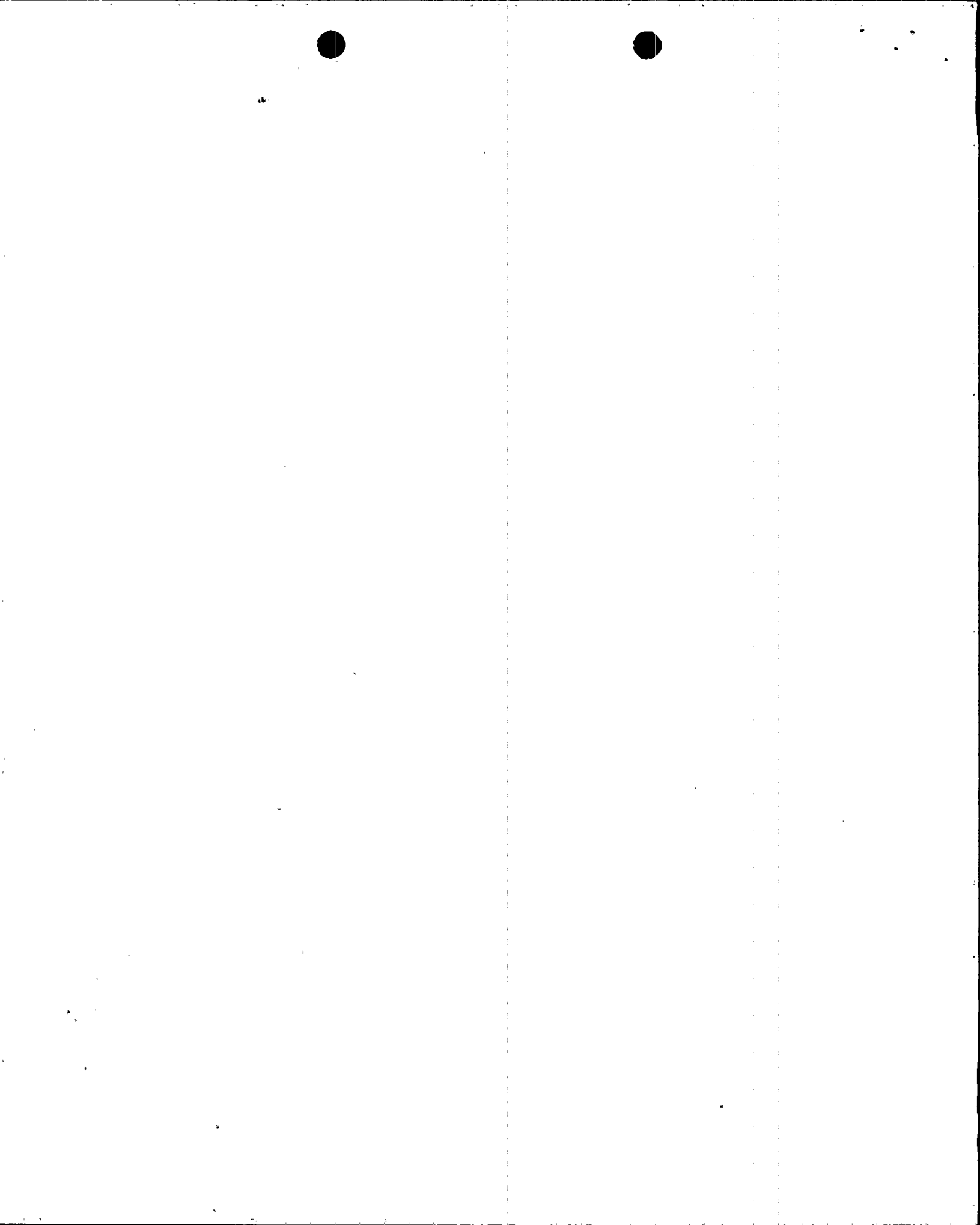
SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
P231 (ITT Grinnell)	Nuclear Service Diaphragm Valves	4", 850, Q1C	3PPCNV024	ZY	P231-36	Unit 1 has used Q1B valve, Dwg. No. P231-38. Unit 3 Dwg. No. P231-24. Requirement is for Q1C only.
			Various	Various	P231-67	Elastomer Diaphragm Irradiation Report
P231 (WPPSS- Tufline) P.O. F-176957/1		3", 850, Q1B	3PCHNV093	ZA	PXX1-186	Unit 3 NTA* procurement under P.O. F176957/1. Unit 1 has 2" Mark 850 under P231/ITT.
P231 (WPPSS- ITT) P.O. F-186868/1		1", 857, Q1B	3PCHNVY70	ZA	PXX3-10	Unit 3 NTA* procurement under P.O. F186868/1. Unit 1 has Mark No. 850/ITT. (Mark No. 850 and 857 are same except 857 is socket weld ends.)

* Non-Traditional Acquisition



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
13-MM-598	Ruskin Back-Draft Dampers	CBS-7	M-HFA-M07 M-HFB-M07	ZF El. 112'-0"	M598-632-6	CDR-92 For these two tag numbers, Unit 1 and Unit 3 have Model CBS-7. MEQP lists Model CDR-92.



MECHANICAL EQUIPMENT QUALIFICATION SHEET

SPECIFICATION	DESCRIPTION	MODEL	TAG NO.	LOCATION	REPORT NO.	DIFFERENCE FROM UNIT 1
M071	Pressure Relief Valves (Lonergan)	LCT-13	J-SPA-PSV-029	Auxiliary Building 100'	Qualification Report was submitted for review	None (Vendor Drawing No. A2957)
			J-SPB-PSV-030	Auxiliary Building 100'	and components will be qualified prior to fuel load for Unit 3.	Bechtel Log No. 13-10407-M071-50-2)



Note (1) = These solenoid valves are identical between Units 1 and 3. However, they are different from the original Equipment Qualification Report. DCP #1SM, 2SM, 3CM - AF-500 changed the actuator for valves J-SGA-UV-172, 175 and J-SGB-UV-130, 135 and also modified the pilot solenoids. The new pilot solenoids are ASCO Model NP8321A7E (UY-130 and 135) and ASCO Model NP8321A5E (UY-172 and 175).

