Docket No. 50-390

SEP 08 1986

Mr. S. A. White
Manager of Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: ENVIRONMENTAL QUALIFICATION REVIEW FOR THE WATTS BAR NUCLEAR PLANT, UNIT 1

As discussed during an August 14, 1986 telecon with your staff, the NRC has compiled a list of 10 equipment packages (Enclosure 1) for which we request TVA fill out a System Component Evaluation Work (SCEW) sheet. Enclosure 2 contains typical examples of such SCEW sheets. Accordingly, we request you submit the SCEW sheets, and Tabs A and B from the Watts Bar 10 CFR 50.49 equipment documentation binders for this equipment for staff review prior to the staff's EQ audit.

In addition, as discussed on August 14, 1986, provide a list of additions, deletions, and significant modifications to your update to the EEEQR submittal of July 24, 1984, and a list of revised equipment packages that TVA considers rollovers of the EQ packages at Sequoyah. If you have any questions concerning this matter, please contact the project manager, T.J. Kenyon, at FTS 492-7377.

Sincerely,

/S/

B.J. Youngblood, Director
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosures: As stated

cc: See next page

DISTRIBUTION:

Docket File	BHayes	
NRC PDR	GZech	NGrace
Local PDR	LSpessard	SWeise, RII
PRC System	SAConnelly	DMuller
NSIC	TNovak	BJYoungblood
PWR#4 Reading	JHolonich	CStahle
MDuncan	TKenyon	WLong
BJYoungblood Reading	TAlexion	BKSingh
TKenyon	KHooks	ACRS (10)
TVAOP (3) S. Richardson AR 5029		OGC
JPartlow	HDenton	BGrimes
EJordan	JTaylor	TPoindexter
HThompson, Jr.	CRossi	

PWR#4/DPWR-A	PWR#4/DPWR-A	EISCB	EISCB	PWR#4/DPWR-A
TKenyon/rad	MDuncan	for Walker	FRosa	BJYoungblood
08/ /86 9/8/86	08/ 8 /86	08/8 /86	08/8 /86	08/ 8 /86 9

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PDR ADOCK 05000390
A PDR

Mr. S. A. White
Tennessee Valley Authority

Watts Bar Nuclear Plant

cc:

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W. C. Drotleff
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Resident Inspector/Watts Bar NPS
c/o U.S. Nuclear Regulatory
Commission
Rt. 2 - Box 300
Spring City, Tennessee 37381

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323

J. A. McDonald
Tennessee Valley Authority
Watts Bar Nuclear Plant
P.O. Box 800
Spring City, Tennessee 37381

Enclosure 1

Selected EQ Documentation
For Watts Bar

Document Number	Type of Equipment	Vendor
SOL-001	Solenoid Operated Valves - Target Rock for NSS Systems	Target Rock
SOL-006	Solenoid Operated Valves - ASCO Model NP8316	ASCO
SOL-007	Solenoid Operated Valves - ASCO Model NP8320	ASCO
CABL-010	Signal Cable - XLPE INS/TVA Type MS	BELDEN
CABL-064	Medium Voltage Power cable	Collyer
TB-001	Terminal Blocks	General Electric
ITE-004	Resistance Temperature Detector - (Fast Response Well-mounted)	RdF
ILCV-001	Electropneumatic Valve Positioner	MASONELIAN
IPT-001	Pressure Transmitters	Westinghouse
IPT-002	Pressure Transmitters	Foxboro

ENCLOSURE 2

EXAMPLE 1

SYSTEM COMPONENT EVALUATION WORK SHEET
BOP

SHEET _____ OF _____

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REFERENCES		QUAL. METHOD
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUAL.	
SYSTEM CABLE SYSTEM PLANT ID NO. NA	OPERATING TIME	1 YR	1 YR	2	3	SIMULTANEOUS TEST ENGINEERING ANALYSIS
COMPONENT LOW VOLTAGE HEAT SHRINKABLE TERMINATION KIT	TEMP. (°F)	400	415	1	3	SIMULTANEOUS TEST
MANUFACTURER RAYCHEM	PRESSURE (psig)	50	66	1	3	SIMULTANEOUS TEST
MODEL NO. NESK	RELATIVE HUMIDITY (%)	100	100	1	3	SIMULTANEOUS TEST
FUNCTION CLASS 1E POWER	CHEMICAL SPRAY	NOTE 1	NOTE 2	1	3	SIMULTANEOUS TEST
ACCURACY SPEC. NA DEMON NA	RADIATION (RADs)	2×10^8 NOTE 3	2×10^8	1	3	SEQUENTIAL TEST
SERVICE VARIOUS	AGING	40 YRS	40 YRS	2	3	SEQUENTIAL TEST ENGINEERING ANALYSIS
LOCATION INSIDE CONTAINMENT	SUBMERGENCE	YES	YES	2	3	SEQUENTIAL TEST
FLOOD LEVEL EL. VARIOUS ABOVE FLOOD LEVEL. NA						

DOCUMENTATION REFERENCES:

1. FSAR CHAPTER 3, TABLE 3.11.B.1-1
2. SPECIFICATION #X3AJ11
3. QUALIFICATION REPORT: NO. QP1-V12

NOTES:

1. H_3BO_3 (2000 PPM) + NaOH 30-35 WT % pH = 10.5-8.5
2. BORON 6200 PPM - HYDRAZINE 50 PPM TRISODIUM PHOSPHATE
3. QUALIFICATION DOSE IS ACCEPTABLE BASED ON CALCULATION X6CHH.03.2

ENCLOSURE 2

EXAMPLE 2

QUALIFICATION EVALUATION WORK SHEET

Prepared By: _____ Date: _____

EQUIPMENT QUALIFICATION FILE NO.113-06-02 Checked By: _____ Date: _____

Equipment Description	Postulated Environment Parameter	Postulated Environment Value	Postulated Environment Reference	Qualified Environment Value	Qualified Environment Reference	Qualification Method	Outstanding Items
Purchase Order No.: 9763-006-113-06 Equipment ID No(s).: EDE-CBL-4	Operating Time	1 Year	2 p. 1	1 Year	3 p. 19 4	Test and Analysis	None
	Peak Temperature (°F)	375	2 p. 1	385	3 Attachment I p. 19	Test	None
Equipment Type: Cable Manufacturer: Brand-Rex	Peak Pressure (Psig)	60	2 p. 1	113	3 Attachment I p. 19	Test	None
Model Number: 300V Instrument & Thermocouple Extension Cable	Relative Humidity (%)	100	2 p. 1	100	3 Attachment I p. 19	Test	None
Accuracy: Spec: N/A Demon: N/A Note 3	Chemical Spray (pH)	Boric Acid 1.2% by wt. pH 7.5 to 10.5	2 p. 1	Boric Acid 3.6% by wt. pH 7.5 to 10.5	3 p. 15 6	Test	None
Limiting Environment:	40 Year Normal Radiation Dose (Rads)	2.0×10^8	2 p. 1, Note 1	2.0×10^8	3 p. C-2	Test	None
Location: Containment Building Rad Zone: Primary Aux. Building (PB-15A, PB-18) Note 1	1 Year Accident Radiation Dose (Rads)	-----	2 p. 1				
	Aging (°F/Years)	194/40 (90°C)	1 p. 7	194/40 (90°C)	3 Attachment II	Test and Analysis	None
Lowest Elevation: 4'-5" Flood Level: 5'-5" Above Flood Level: No	Submergence	1' Below Flood Level	8, 9 and 10	30 Days	11 Note 2	Test and Analysis	None

Documentation References:

1. ecification No. 9763-006-113-6, Rev. 2, 300V Instrument Cable, 11/30/82.
2. 9763-F-300219, Rev. 17, Service Environment Chart, 7/22/85.
3. P-31/32-03, rKC Report No. F-C5120-4, Qualification of Instrumentation Cables in a Simulated Steam Line Break and Loss-of-Coolant-Accident Environment, 4/12/82.
4. Calculation, 0570-032-004.
5. -92605, , letter to Impell, dated 2/13/85
6. E.Q. File No. 113-06-02, Assessment Checklist, Note 11.
7. E.Q. File No. 113-06-02, Assessment Checklist, Note 10.
8. -46263, letter, "Flooding Study Matrix".
9. Letter No. 0570-032-NY-156, 2/2/86
10. Memorandum from G. Moore to A. Biswas, dated 2/22/86.
11. ile No. 113-06-02, Assessment Checklist, Note 7.

Notes:

1. The limiting zones for radiation are Zones PB-15A and PB-18. Environmental Zones PB-4 and PB-19 have been excluded since no electrical equipment is installed in these areas. (Reference 5)
2. Areas outside containment will be pumped dow prior to exceeding the 30 day submergence qualification time.
3. Thermocouple Cable is not required to perfor an active safety function subsequent to accident events (Reference 7), and accuracy does not have to be addressed.