ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8912200207 DOC.DATE: 89/12/14 NOTARIZED: NO DOCKET #
FACIL:50-260 Browns Ferry Nuclear Power Station, Unit 2, Tennessee 05000260
AUTH.NAME AUTHOR AFFILIATION
RAY,M.J. Tennessee Valley Authority
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Submits final response to NRC 890831 request for addl info re RHR pumps at facility.

DISTRIBUTION CODE: D030D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
TITLE: TVA Facilities - Routine Correspondence

NOTES:1 Copy each to: S.Black,D.M.Crutchfield,B.D.Liaw, 05000260
R.Pierson,B.Wilson

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	LA	1	1	PD	1	1
	GEARS,G	1	1			
INTERNAL:	ACRS	1	1	NUDOCS-ABSTRACT	1	1
	OC/LFMB	1	0	OGC/HDS2	1	0
	REG FILE 01	1	1			
EXTERNAL:	LPDR	1	1	NRC PDR	1	1
	NSIC	1	1			
NOTES:		5	5			

TOTAL NUMBER OF COPIES REQUIRED: LTTR 16 ENCL 14

MA4

R I D S / A D D S

R I D S / A D D S

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

DEC 14 1989

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket No. 50-260
Tennessee Valley Authority)

BROWNS FERRY NUCLEAR PLANT (BFN) - RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE RESIDUAL HEAT REMOVAL (RHR) PUMPS

This letter is TVA's final response to NRC's letter of August 31, 1989, requesting additional information concerning the RHR pumps for BFN, Unit 2. Four items of additional information (1.0 through 4.0) were requested to allow further investigation and evaluation of RHR motor protection and RHR motor operating temperatures.

On November 6, 1989, TVA submitted information regarding Item 2.0 (RHR pump motor electrical protection relay settings, including the current transformer ratios) and Item 3.0 (RHR pump head - horsepower versus flow curve). Additional time was requested in this submittal to obtain the information needed for Item 1.0 (RHR pump motor thermal damage curve) and Item 4.0 (RHR pump motor insulation class, rated temperature rise, and rated ambient temperature) from General Electric.

Enclosure 1 of this submittal contains the information requested for Item 1.0, and Enclosure 2 contains the information requested for Item 4.0. This information is considered typical of all four RHR pumps on Unit 2.

This submittal contains no commitments.

If you have any questions, please telephone Patrick P. Carier, BFN, at (205) 729-3570.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

M J Ray, Jr

Manager, Nuclear Licensing
and Regulatory Affairs

Enclosures
cc: See page 2

D030
1/1

U.S. Nuclear Regulatory Commission

DEC 14 1989

cc (Enclosures):
Ms. S. C. Black, Assistant Director
for Projects
TVA Projects Division
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Mr. B. A. Wilson, Assistant Director
for Inspection Programs
TVA Projects Division
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NRC Resident Inspector
Browns Ferry Nuclear Plant
Route 12, Box 637
Athens, Alabama 35609-2000

DEC 14 1989

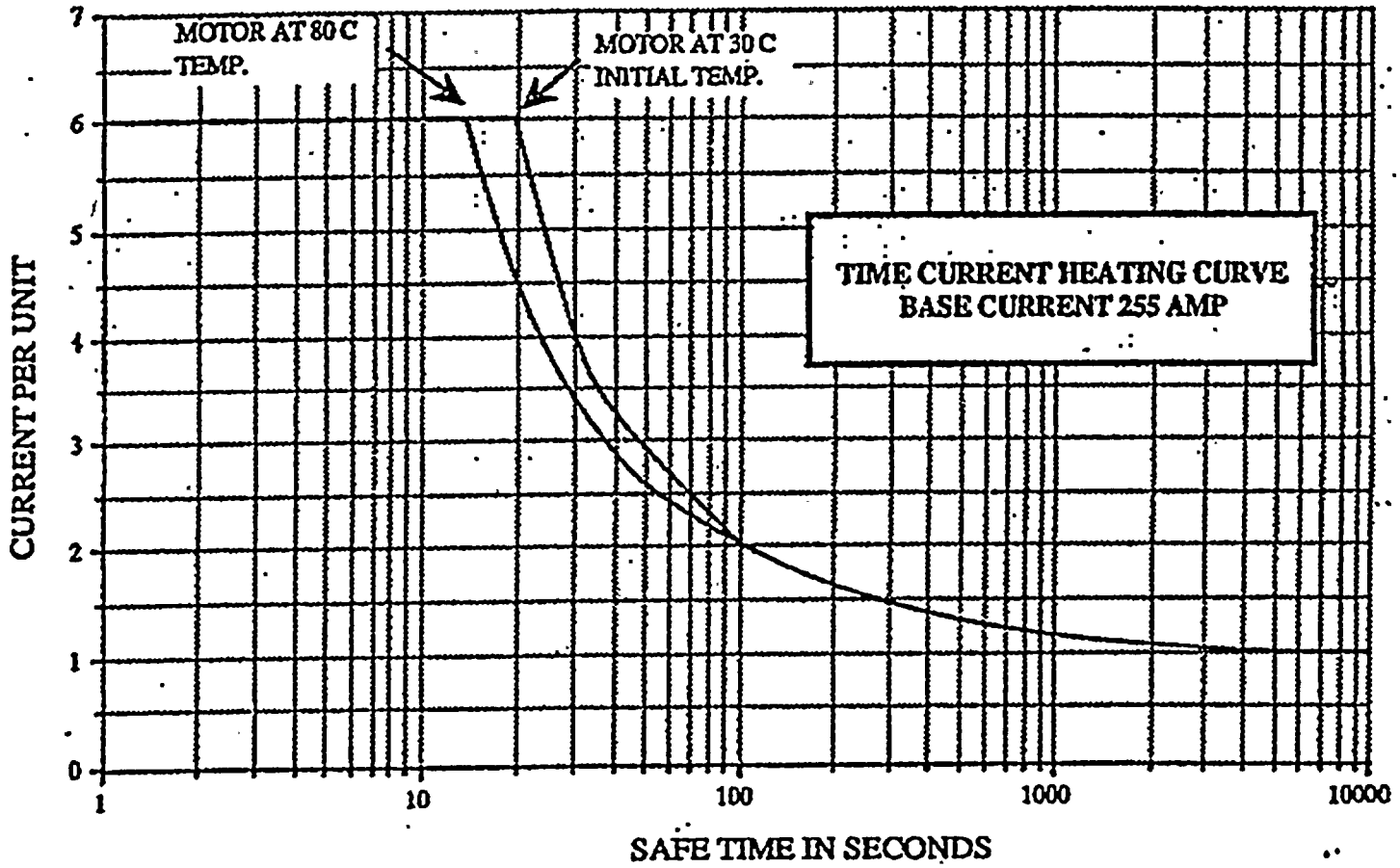
ENCLOSURE 1

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
CONCERNING THE RESIDUAL HEAT REMOVAL (RHR) PUMPS

Item 1.0 - The RHR Pump Motor Thermal Damage Curve

The following thermal damage curve relates current versus time. This curve is drawn based on the stall time data available for the subject motor; i.e., 14 seconds from 80 degrees C motor temperature or 20 seconds from initial motor temperature of 30 degrees C. The electrical design data for this motor was used to calculate and verify other points of the curve.

TVA-BROWNS FERRY II, RHR MOTOR MODEL NUMBER 5K6348XC23A
2000 HP-4P-1800RPM-3PH-60Hz-4000V



Note1 Calculations show that this motor is rotor limited, i.e. if stalled, rotor bars would reach higher temperature before copper winding in the stator.

Note2 Safe Time at full load current is equal to the rated running life of the motor.

GE NUCLEAR ENERGY
SAN JOSE, CALIFORNIA

10/69-IJD

ENCLOSURE 2

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
CONCERNING THE RESIDUAL HEAT REMOVAL (RHR) PUMPS

Item 4.0 - Provide the RHR pump motor insulation class, rated temperature rise, and rated ambient temperature.

Stator winding is Custom Polyseal, class B insulation.

Rated temperature rise is 40 degrees C by thermometer and the corresponding temperature rise by resistance is 50 degrees C.

Rated maximum ambient temperature is 65 degrees C for long-term operation of the motor.