GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775

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July 8, 1985
RBG- 21485
File Nos. G9.5

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

River Bend Station - Unit 1
Docket No. 50-458

Enclosed for your review are revisions to the River Bend Station Final Safety Analysis Report (FSAR) Section 8.3. These minor revisions provide final loading information for the standby diesel generators. No additional impact is expected on the Safety Evaluation Report or the proposed Technical Specifications. These revisions will be included in a future FSAR amendment.

Sincerely,

J. E. Booker

J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/ERG/je

Enclosures (2)

B001

TABLE 8.3-2a

AUTOMATIC AND MANUAL LOADING OF ESF BUSES

Division I - 1EGS*EG1A

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident: Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Control Bldg Chilled Water Pump	1HVK*P1A	1	1	50	37	31.0	10 sec	(3)		
Control Bldg Chilled Cond Recirc Pump	1SWP*P3A	1	1	15	6.3	5.6	10 sec	(3,13)		21
Equip Rm Air Condition Unit Motor	1HVC*ACU3A	1	1	5	1.93	1.9	10 sec	(3)		
Charcoal Filter Heater	1HVC*FLT3AE	1	1	23 kW	-	23.0	10 sec	(3)		
Filter Train Booster Fan	1HVC*FN1A	1	1	25	19	16.3	10 sec	(3)		
Stdby Swgr Room Exhaust Fan	1HVC*FN2A	1	1	30	23.4	19.2	10 sec	(3)		
Battery Room Exhaust Fan	1HVC*FN3A or D	2	1	1.5	0.9	0.9	10 sec	(3)		
Auxiliary Building Unit Coolers	1HVR*UC3	1	1	7.5	5.22	4.7	10 sec	(3)		
	1HVR*UC6	1	1	40	39.0	33.0	10 sec	(3)		
	1HVR*UC7	1	1	15	11.0	9.6	10 sec	(3)		
	1HVR*UC2	1	1	5	3.22	2.9	10 sec	(3)		21
Filter Train Exhaust Blower	1HVF*FN3A	1	1	40	30.0	25.0	10 sec	(3)		
Filter Train Heater	1HVF*FLT2AE	1	1	57 kW	-	57.0	10 sec	(3)		
Stdby Serv Water Pmp Hse Supply Fan	1HVY*FN1A	1	1	7.5	5.85	5.3	10 sec	(3,9)		
Motor-Operated Valves	Misc	Misc	Misc	-	-	98.0	10 sec	(3,4)		
120V AC Stdby Power	Misc	Misc	Misc	50 kVA	-	35.0		(3)		20
Stdby Vital Bus 'A' UPS System	1ENB*INV01A	1	1	20 kVA	-	14.25	10 sec	(3)		
125-V DC Battery Charger	1ENB*CHGR1A	1	1	48.0 kW	-	33.75	10 sec	(3)		
Stdby Cooling Tower #1 Swgr Fan	1HVY*FN2A or C	2	1	3	2.03	2.0	10 sec	(3)		
Stdby D/G Fuel Trans Pump	1EGF*P1A	1	1	3	0.81	0.61	10 sec	(3)		
Misc. Transformer Losses	4160/480V					18.15	10 sec			
Safety Lighting - Control Building	1LAC-XLC9	1	1	15 kW	-	10.00	10 sec	(3)		
RCIC Disch. Line Fill Pump	1E51*C003	1	1			3.65	10 sec	(3)		21
Exciter Panel Cooling Fan	1HVP*FN6A	1	1	5.0	1.7	1.58	10 sec	(3)		
Total: 10-Sec Load Block									452.39	21
Low-Pressure Core Spray Pump	1E21*C001	1	1	1250	1250	917.2	12 sec	(11,3)		
Total: 10-15-Sec Load Block									917.2	
Residual Heat Removal Pump 'A'	1E12*C002A	1	1	700 hp	630	509.2	17 sec	(3)		
Total: 15-20-Sec Load Block									509.2	
Stdby DG Room Vent Fan	1HVP*FN2A	1	1	100	-	73.2	30 sec	(3)		21
Annulus Mixing System Fan	1HVR*FN11A	1	1	150	135	109	30 sec	(3)		

TABLE 8.3-2a (Cont)

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Stdby Gas Treatment Fan	1GTS*FN1A	1	1	60	50.5	41.6	30 sec	(3)		
Stdby Gas Treatment Heater	1GTS*H1A	1	1	85 kW	-	85	30 sec	(3)		
Aux. Bldg Unit Cooler	1HVR*UC11A	1	1	75	63.3	52.5	30 sec	(3)		
Total: 30-40-Sec Load Block									361.3	
Cont Rm Air Conditioning Unit	1HVC*ACU1A	1	1	75	60	50	60 sec	(3)		
Stdby Swgr Rm Air Handling Unit	1HVC*ACU2A	1	1	75	63.8	53	60 sec	(3)		
Stdby Service Water Pump	1SWP*P2A	1	1	450 hp	413.0	328.5	70 sec	(3)		
Total: 60-90-Sec Load Block									431.5	
Control Building Chiller	1HVK*CHL1A	1	1	250	242.6	200	160 sec	(3,12,13)		21
Control Building Chiller-L.O. Pump	1HVK*CHL1APL	1	1	1.5	1.5	1.4	160 sec	(3,13)		
Total: 1.5-3-Min Load Block									201.4	
Containment Unit Cooler	1HVR*UC1A	1	1	150	83.6	68	10 min	(3)		
Leakage Control Air Comp.	1LSV*C3A	1	1	60	50	42.0	10 min	(4)		20
Total: 10-12-Min Load Block									111.0	
Maximum Coincidence Load Which Could Automatically Start									2885.99	21
Auxiliary Building MCC Misc	1NHS-MCC102A	Misc	Misc			20.0	>2.0 hr	(5)		
Drywell Unit Clr	1DRS-UC1A	1	1			42.5	>2.0 hr	(5)		
	1DRS-UC1C	1	1			42.5	>2.0 hr	(5)		
	1DRS-UC1E	1	1			42.5	>2.0 hr	(5)		
Control Building Chilled Water Pump	1HVK*P1C	1	1	50	37	31.0	>2.0 hr	(5)		
Control Room Heater	1HVC*CH1A	1	1			65.0	-			
Control Room Charcoal Filter Decay Heat Removal Fan	1HVC*FN8A	1	1			0.8	-			
LPCS Disch. Line Fill Pump	1E21*C002	1	1			2.15	-			
Cont. Bldg Chilled Cond. Recirc. Pump	1SWP*P3C	1	1	15	6.3	5.60	>2.0 hr	(5,13)		21
F.B. Filter Decay Heat Removal Fan	1HVF*FN7A	1	1			0.2	-			
SGTS Filter Decay Heat Removal Fan	1GTS*FN2A	1	1			0.3	-			

TABLE 8.3-2a (Cont)

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident						
				Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Normal Battery Charger	1BYS-CHGR1A	1	1	48		48	>2.0 hr	(8)		
Standby Cooling Tower Fans	1SWP*FN1A	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1C	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1E	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1G	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1J	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1L	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1N	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1Q	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1S	1	1	40	40	34	>2.0 hr	(8)		
	1SWP*FN1U	1	1	40	40	34	>2.0 hr	(8)		
Fuel Pool Cooling Pumps	1SPC*P1A	1	1	100	75	62	>2.0 hr	(8)		
Drywell Hydrogen Mixing Fan	1CPM*FN1A	1	1	1.5	1.0	0.97	>2.0 hr	(8)		
Standby Liquid Control Pump	1C41*C001A	1	1	40	-	37.3	>2.0 hr	(8)		
Hydrogen Recombiner	1HCS*RBNR1A	1	1	75 kW	-	75.0	>2.0 hr	(8)		
Standby Cooling Tower Remote Intake Fan	1HVY*FN32A	1	1	5.0		4.0	>2.0 hr	(8)		20
Standby Cooling Tower Remote Intake Heater	1HVY*CH6A	1	1	30		30.0	>2.0 hr	(8)		
Control Building Chiller	1HVK*CHL1C	1	1	250	242.6	160	>2.0 hr	(8,12,13)		21
Control Building Chiller-L.O. Pump	1HVK*CH1CPL	1	1	1.5		1.4	>2.0 hr	(8,13)		
Auxiliary Building Unit Cooler	1HVR*UC8	1	1			12.0	>2.0 hr	(8)		

TABLE 8.3-2b

AUTOMATIC AND MANUAL LOADING OF ESF BUSES

Division II - EGS*EG1B

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident						
				Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Control Bldg Chilled Water Pump	1HVK*P1B		1	50	37	31.0	10 sec	(3)		
Control Bldg Chilled Cond Recirc Pump	1SWP*P3B	1	1	15	6.3	5.6	10 sec	(3,13)		21
Equipment Room Air Condition Unit	1HVC*ACU3B	1	1	5	1.93	1.9	10 sec	(3)		
Charcoal Filter Heater	1HVC*FLT3BH	1	1	23 kW	-	23.0	10 sec	(3)		
Filter Train Booster Fan	1HVC*FN1B	1	1	25	19	16.3	10 sec	(3)		
Stndby Swgr Room Exhaust Fan	1HVC*FN2B	1	1	30	22.4	19.2	10 sec	(3)		
Battery Room Exhaust Fan	1HVC*FN3B or E	2	1	1.5	0.9	0.9	10 sec	(3)		
Auxiliary Building Unit Coolers	1HVR*UC4	1	1	7.5	4.37	4.0	10 sec	(3)		
	1HVR*UC9	1	1	30	26	21.8	10 sec	(3)		
	1HVR*UC10	1	1	5	1.9	1.7	10 sec	(3)		
Fuel Building Filter Train Fan	1HVF*FN3B	1	1	40	30	25.0	10 sec	(3)		
Fuel Building Filter Train Heater	1HVF*FLT2BH	1	1	57 kW	-	57.0	10 sec	(3)		
Motor-Operated Valves	Misc.	Misc.	Misc.	-	-	98.0	10 sec	(3,4)		
120-V AC Stndby Power	Misc.	Misc.	Misc.	50 kVA	-	35.0	10 sec	(3)		
Stndby Vital Bus (B) UPS	1ENB*INV01B	1	1	20 kW	-	12.3	10 sec	(3)		
Stndby Cooling Tower Swgr Fan	1HVY*FN2B or 2D	2	1	3	2.03	2.0	10 sec	(3)		20
Stndby Serv Water Pumphouse Fan	1HVY*FN1B or 1D	2	1	7.5	5.85	5.3	10 sec	(3)		
Stndby DG Fuel Transfer Pump	1EGF*P1B	1	1	3	0.81	0.61	10 sec	(3)		
125-V DC Battery Charger	1ENB*CHGR1B	1	1	48.0	-	35.7	10 sec	(3)		
Safety Lighting - Cont. Bldg.	1LAC-XLC9	1	1	15	-	10.0	10 sec	(3)		
Stndby DG Room Supply Fan	1HVP*FN6B	1	1	3.0	2.7	2.6	10 sec	(3)		21
Miscellaneous Transformer Losses						18.15	10 sec			
Total: 10-Sec Load Block									427.06	21
Residual Heat Removal Pump	1E12*C002C	1	1	700	630	509.2	12 sec	(3)		
Total: 10-15-Sec Load Block									509.2	
Residual Heat Removal Pump	1E12*C002B	1	1	700	630	509.2	17 sec	(3)		
Total: 15-20-Sec Load Block									509.2	
Stndby DG Room Vent Fan	1HVP*FN2B	1	1	100	-	73.2	30 sec	(3)(12)		21
Annulus Mixing System Fan	1HVR*FN11B	1	1	150	57.0	109	30 sec	(3)		
Stndby Gas Treatment Fan	1GTS*FN1B	1	1	60	50.5	41.6	30 sec	(3)		
Stndby Gas Treatment Heater	1GTS*H1B	1	1	85 kW	-	85	30 sec	(3)		

TABLE 8.3-2b (Cont)

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident: Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Aux. Bldg. Unit Cooler	1HVR*UC11B	1	1	75	63.3	52.5	30 sec	(3)		
Total: 30-40-Sec Load Block									361.3	
Stndby Service Water Pump	1SWP*P2B	1	1	450	413	328.5	40 sec	(3)		
Total: 40-60-Sec Load Block									328.5	
Control Bldg Air Condition Unit	1HVC*ACU1B	1	1	75	60	50.0	60 sec	(3)		
Stndby Swgr Room Air Handling Unit	1HVC*ACU2B	1	1	75	63.8	53.0	60 sec	(3)		
Stndby Service Water Pump	1SWP*P2D	1	1	450	413	328.5	70 sec	(3)		
Total: 60-90-Sec Load Block									437.5	
Control Building Chiller	1HVK*CHL1B	1	1	250	242.6	200	160 sec	(3,12,13)		21
Control Building Chiller-L.O. Pump	1HVK*CHL1BPL	1	1	1.5	1.5	1.4	160 sec	(3,13)		
Total: 1.5-3-Min Load Block									201.4	
Containment Unit Cooler	1HVR*UC1B	1	1	150	83.6	68.0	10 min	(3)		
Leakage Control System - Air Compressor	1LSV*C3B	1	1	60	50.0	43.0	10 min	(3)		20
Total: 10-12-Min Load Block									111.0	
Maximum Coincidence Load Which Could Automatically Start									2781.16	21
Auxiliary Building MCC Misc	1NHS-MCC102B	Misc	Misc			20.0	>2.0 hr			
Drywell Unit Clr										
	1DRS-UC1B 1	1				42.5	>2.0 hr			
	1DRS-UC1D 1	1				42.5	>2.0 hr			
	1DRS-UC1F 1	1				42.5	>2.0 hr			
Containment Unit Cooler	1HVR-UC1C	1	1			68	>2.0 hr			
Control Bldg Chilled Water Pump	1HVK*P1D	1	1	50	37	31.0	>2.0 hr			
Control Room Heater	1HVC*CH1B	1	1		-	65	-			
Control Room Charcoal Filter Decay Heat Removal Fan	1HVC*FN8B	1	1		-	0.4	-			
FB Filter Decay Heat Removal Fan	1HVF*FN7B	1	1			0.2	-			
SGTS Filter Decay Heat Removal Fan	1GTS*FN2B	1	1			0.3	-			
Normal Battery Charger	1BYS-CHGR1B	1	1	48		48	>2.0 hr			
Turbine Bldg MCC	1NHS-MCC101	1	1			175	>2.0 hr			
Info Sys Handling Battery Charger	1IHS-CHGR1D	1	1	48		48	>2.0 hr			

TABLE 8.3-2b (Cont)

Load Description	Load ID No.	No. on Bus	No. Req'd	Loss-of-Coolant Accident: Nameplate (2) hp/kW	Running bhp(2)	Running kW(2)	Time Start (1)	Time Stop	Block Load Total kW	
Standby Cooling Tower Fans	1SWP*FN1B	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1D	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1P	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1H	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1K	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1M	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1P	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1R	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1T	1	1	40	40	34	>2.0 hr	(5)		
	1SWP*FN1V	1	1	40	40	34	>2.0 hr	(5)		
Fuel Pool Cooling Pumps	1SFC*P1B	1	1	100	75	62	>2.0 hr	(5)		
Drywell Hydrogen Mixing Fan	1CPM*FN1B	1	1	1.5	1.0	0.97	>2.0 hr	(5)		
Stndby Liquid Control Pump	1C41*C001B	1	1	40	-	37.3	>2.0 hr	(5,7)		
Hydrogen Recombiner	1HCS*RBNR1B	1	1	75kW	-	75.0	>2.0 hr	(5)		
Stdby Clg Tower Remote Intake Fan	1HVY*FN32B	1	1	5.0	4.33	4.0	>2.0 hr	(5)		
Stdby Clg Twr Remote Intake Heater	1HVY*CH6B	1	1	30.0 kW	30.0 kw	30.0	>2.0 hr	(5)		
Control Building Chiller	1HVK*CHL1D	1	1	250	242.6	200	>2.0 hr	(5,12,13)		21
Control Bldg Chiller - L.O. Pump	1HVK*CHL*DPL	1	1	1.5	1.5	1.4	>2.0 hr	(5,13)		
RHR Disch. Line Fill Pump	1E12*C003	1	1			2.15	-			
Control Bldg Chilled Cond Recirc Pump	1SWP*P3D	1	1	15	6.3	5.6	>2.0 hr	(5,13)		21

20

See Notes and Load Profile (Fig. 8.3-14a and b, and 15) for effective loads.

TABLE 8.3-__ (Cont)

NOTES FOR TABLES 8.3-2a and 8.3-2b

(1)The time indicated in this column is calculated from the instant LOCA and/or LOOP signals given to emergency diesel generators. Maximum time for standby diesel generators to start and attain rated speed and frequency, including diesel generator air circuit breaker (ACB) closure, is 10 sec.

(2)Nameplate horsepower and brake horsepower are supplied by vendors for their furnished equipment. The required kilowatts for each load are calculated by using brake horsepower and the efficiency data supplied by vendors of the respective equipment.

(3)This load starts and/or stops automatically with satisfactory complete actuation or energization of its associated pump, valves, pressure or temperature switches' interlocks, or energization of the required buses from the standby power sources.

(4)Motor operators of the MOVs stop automatically when the valve action is completed. All MOV loads complete their intended operation and are deenergized within 10 min of diesel generator ACB closing. MOV actuation after 10 min is assumed to occur on an individual and random basis, and the resultant loads are assumed to be inconsequential.

(5)Started and/or stopped manually by operator.

(6)1LAC-XLC9 has two sources of power from which it may select. This is not tripped on LOCA and is normally connected to diesel generator 1EGS*EG1B. On diesel generator 1EGS*EG1B failure, 1LAC-XLC9 can be manually connected to diesel generator 1EGS*EG1A. 20

(7)1C41*C001A and B may be energized at the discretion of the plant operator.

(8)The attached load profile is a representative loading considering a single failure during LOCA and loss of offsite power. At 2 hr, operators' manual actions are shown to trip and start loads which must not exceed the DG allowable loading limits.

(9)1HVY*FN1A is supplied from diesel generator 1EGS*EG1A. 1HVY*FN1C and 1SWP*P2C are supplied from 1E22*S001G1C independently. The operator shall shut off either 1HVY*FN1A or 1HVY*FN1C at his discretion if both fans operate simultaneously.

(10)Times and load values shown are for information only. Actual setpoints are shown on the setpoint calculations.

(11)See Table 8.3-3 for loading of Division III ESF buses.

(12)Indicated kW demand is based on actual heat release loads of the equipment.

(13)Chiller 1HVK*CHL1A and its L.O. pump are sequenced to start automatically at 160 sec. If 1HVK*CHL1A fails to start, chiller 1HVK*CHL1C, its associated L.O. pump, and chilled condensate recirculation pump shall start automatically. Logic for chillers 1HVK*CHL1B and 1D is similar. 21

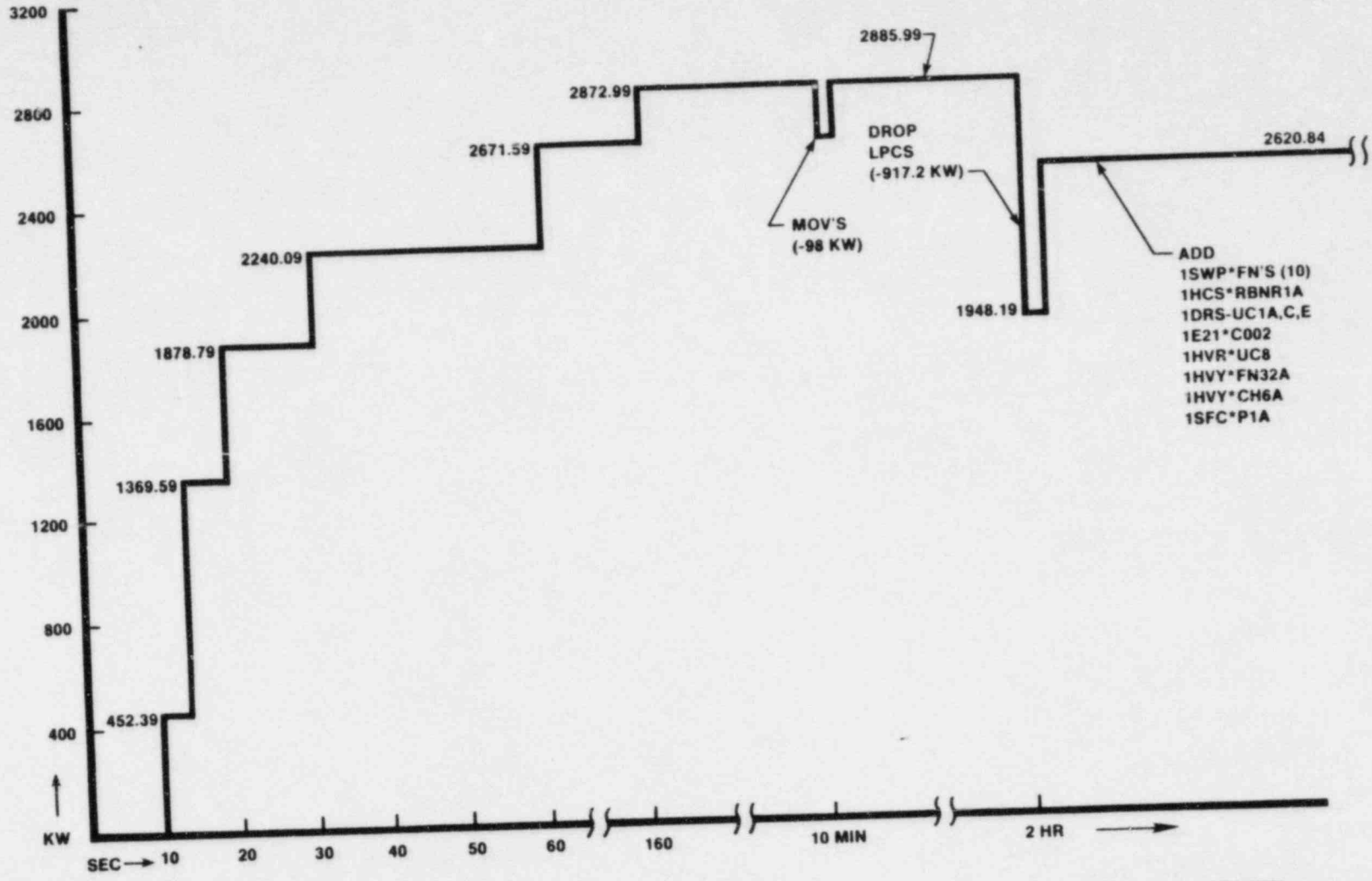

FIGURE 8.3-14a

LOAD PROFILE — DG1A
DG1A & DG1C OPERATING
DG1B FAILED

RIVER BEND STATION
FINAL SAFETY ANALYSIS REPORT

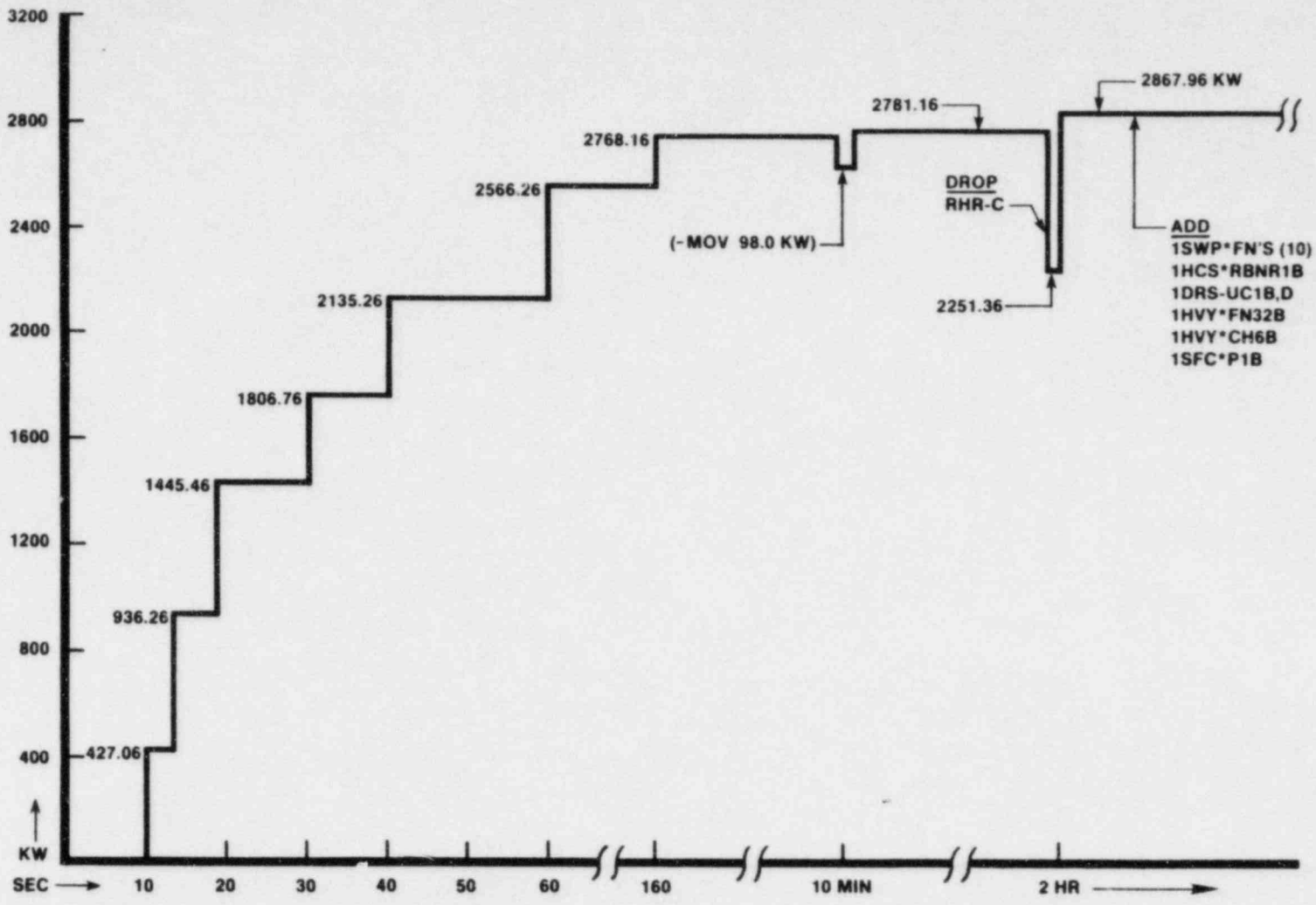

FIGURE 8.3-14b

LOAD PROFILE — DG1B
DG1B & DG1C OPERATING
DG1A FAILED

RIVER BEND STATION
FINAL SAFETY ANALYSIS REPORT

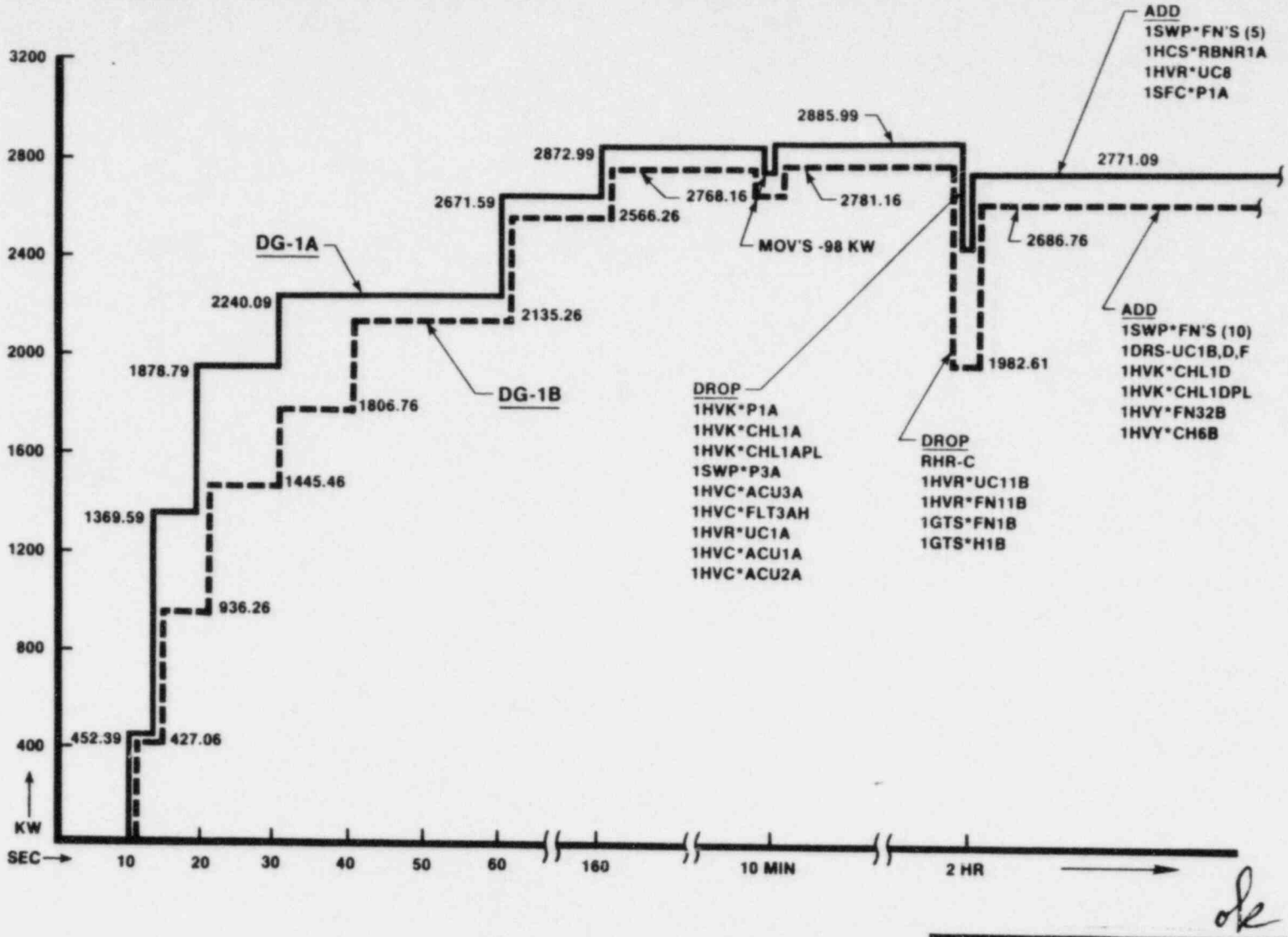

FIGURE 8.3-15

LOAD PROFILE DG1A & 1B
DG1A & 1B OPERATING
DG1C FAILED

RIVER BEND STATION
FINAL SAFETY ANALYSIS REPORT