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ROBER,R.W. Rochester Gas & Electric Corp.
RECIP.NAME RECIPIENT AFFILIATION
CRUTCHFIELD,D. Operating Reactors Branch 5

SUBJECT: Forwards addl info re App R interim actions to provide acceptable level of fire protection safety.Info provides justification for exemption request to extend schedule for completion of mod at facility.

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ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001

ROGER W. KOBER
VICE PRESIDENT
ELECTRIC & STEAM PRODUCTION

TELEPHONE
AREA CODE 716 546-2700

April 9, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Appendix R Compliance
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

By a letter dated December 27, 1983, Rochester Gas and Electric requested an exemption from federal regulations to extend the schedule for completion of modifications at the R. E. Ginna Nuclear Power Plant necessary to achieve compliance with 10 CFR Part 50 Appendix R. A detailed report describing the analyses performed for Appendix R compliance and describing the resulting planned modifications was submitted with a letter dated January 16, 1984. Subsequently, in discussions with NRC Staff members, RG&E was requested to provide additional information concerning interim actions that the company will take to provide an acceptable level of fire protection safety until full compliance with the regulation is achieved. Those actions described in Attachment A, when coupled with the more than $15 million dollars worth of fire protection features installed at Ginna since the Browns Ferry fire, assure that a stable plant shutdown can be achieved following a fire in each fire area, including the control room. This combination of permanent modifications and temporary actions justify the schedule extension requested.

One of the reasons a schedule extension is required is that a significant amount of modification work is already planned at Ginna for the next several years. Much of this work is scheduled to comply with other NRC directives. Information concerning this future work is contained in Attachment B.

Because we are anxious to have the schedule exemption acted upon before May 1, 1984, please contact me quickly if you require further information.

Very truly yours,

Roger W. Kober

Roger W. Kober

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ATTACHMENT A

APPENDIX R INTERIM ACTIONS

R. E. GINNA NUCLEAR POWER PLANT

ROCHESTER GAS AND ELECTRIC CORPORATION

MARCH 1984

The RG&E report titled "Appendix R Alternative Shutdown System", dated December 1983, describes the analyses performed for the R. E. Ginna Nuclear Power Plant for conformance with 10 CFR 50 Appendix R. Certain fire areas of the plant will not conform to the requirements of Appendix R until modifications to the plant are completed. However, during an interim period until the modifications are installed, actions can be taken to assure that a stable shutdown of the plant can be achieved following a fire in each fire area.

Table 1 summarizes the fire areas requiring modifications and identifies interim actions that RG&E will take until the modifications are completed. Interim actions are identified for each of the safe shutdown functions which could be lost due to a fire in each of these areas. These interim actions supersede the interim measures identified in a Rochester Gas and Electric letter dated December 27, 1983. The definitions of fire areas and safe shutdown functions and equipment designators are consistent with the December 1983 report.

Interim actions considered for each of the fire areas were either supplementary fire protection measures such as barriers, suppression systems or fire watches, or were procedures and equipment which could be used to repair or compensate for the loss of safe shutdown equipment. In arriving at the best interim actions, both supplementary fire protection measures and procedures were considered for each fire area except the control room where procedures are provided to meet Staff guidance. Each of the actions presented has been discussed with one or more Staff members and meets our understanding of current Staff requirements. Barriers which have been identified to be upgraded in the December 1983 report will ultimately be installed with a one-hour or three-hour rating or justification will be provided for a different configuration. In the interim period, all required barriers will at least be made contiguous (no openings). Modifications to existing barriers for the interim period will be made with materials normally used to construct barriers with fire ratings but will not be rated.

Procedures which will be used for interim actions will be available for review on site in final draft form by April 9, 1984. Plant modifications listed on the table will be completed prior to startup from our current refueling outage. Fire watches will be provided whenever the plant is not in cold shutdown after startup from the current outage. Each of these interim measures will remain in place until permanent modifications are completed which replace the specific interim actions.

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - BRIB FUNCTION - Support			
a) power feeds to EDG 1A and 1B dc distribution panels		a,b,c) fire barriers between redundant trains	
b) EDG 1A and 1B power feeds			
c) ABDP 1A and 1B dc power feeds			
d) EDG 1A and 1B control circuits	d) procedure for local start and operation of EDG's including fuse pulling and control wire retermination to isolate EDG from CR		
e) SW pump control	e) procedure for local operation of SW pump breakers in SH		
FIRE AREA - ABO FUNCTION - NA			
a) unrated stairways and open hatches between ABO and ABBM			a) Fire watch in ABBM until suppression at openings upgraded
FIRE AREA - ABBM FUNCTION - NA			
a) open stairways and hatches between ABO and ABBM			a) fire watch in ABBM until suppression upgraded at openings

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - ABBM FUNCTION - Support			
a) EDG 1A and 1B power feeds			a,b) cables covered by by detection and automatic suppression. No other action required.
b) ABDP 1A and 1B power feeds			
c) battery charger 1A and 1B power feeds	c) existing procedure to use TSC battery and/or TSC charger (E4.4A and E 4.4B)		
FIRE AREA - ABBM FUNCTION - RCS Makeup			
a) charging pump 1A power feed L398			a,b) existing detection and automatic suppression coverage over hazards adequate for interim
b) charging pump 1A control feeds L400, L400A			
c) charging and SI pump separation		c) install contiguous barrier between CHG and ABBM or fire watch until barriers installed	

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - ABBM FUNCTION - Process Instrumentation			
a) charging flow indications FI-115, 116 (only if operator controlling manually and can't see other RCS indication)			a) pressurizer level indication and other instrumentation adequate for interim
FIRE AREA - CHG FUNCTION - NA			
a) Charging and SI pump separation		a) install contiguous barrier between CHG and ABBM or fire watch in ABBM until barriers installed.	

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - SH FUNCTION - Support			
a) loss of service water	a) procedure for use of city water for EDG cooling and AFW supply		
b) loss of EDG 1A and 1B			b) fire watch in SH or procedure to cut cables to isolate bus 17 if offsite power lost.
FIRE AREA - EDGV FUNCTION - Support			
a) EDG 1A and 1B power feeds (ac & dc)		a) upgrade fire barrier to provide separation between trains with materials normally used for 3 hr barriers.	
b) SW pump control	b) procedure for local operation of SW pump breaker or city water for EDGs and AFW		
c) manhole cover in fire barrier			c) revise submittal, barrier meets Generic Letter 83-33 requirement. No interim action required.

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - CT AND ZONES AHR RR FUNCTION - Process Monitoring			
a) RCS pressure			Existing detection and automatic suppression in all areas. AHR has suppression over hazards, RR and CT has suppression throughout
b) RCS temperature			
c) pressurizer level			
d) SG pressure			
e) SG level			limited access
f) CVCS flow			areas are not travel routes to other areas
g) AFW flow			No interim action required
h) source range			

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - CT AND ZONES AHR RR FUNCTION - Support			
a) loss of EDG control			a-d) Existing detection and automatic suppression adequate to limit damage. No interim action required.
b) loss of EDG breaker control			
c) loss of SW pump control			
d) loss battery chargers 1A and 1B			
FIRE AREA - CT AND ZONES AHR RR FUNCTION - NA			
a) full area suppression in AHR			a) existing detection, automatic suppression over hazards, limited access, not on travel route to other areas. No interim action required.

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - CT AND ZONES AHR RR FUNCTION - RCS Makeup			
a) loss of charging pump and SI pump control			a) existing detection and automatic suppression adequate to limit damage. No interim action required.
FIRE AREA - CT AND ZONES AHR RR FUNCTION - Decay Heat Removal			
a) loss of control to MAFW, SAFW and TDAFW systems			a) see above
FIRE AREA - IBN FUNCTION - Process Monitoring			
a) SG pressure		a) install local pressure indication in TB	
b) source range		b) use sampling as backup to source range	
c) SW pump control	c) procedure for local operation of SW pump breakers in SH		

note: Alternative Shutdown Report indicates all primary temperature indication routed through IBN, however, 408 A&B routed through ABBM, CT, CC.

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - ZONE CR FUNCTION - RCS Makeup			
a) loss of CHG and SI control	a) procedure to isolate and control charging pump in ABBM		
FIRE AREA - ZONE CR FUNCTION - Support			
a) loss of EDG control	a) procedure for local start of EDG including fuse pulling and control wire retermination to isolate EDG from CR		
b) loss of Bus 14 and 16 EDG breaker control	b) procedure for local closure of breaker at Bus 14		
c) loss of service water pump control	c) procedure for local operation of SW breakers or procedure for use of city water supply for EDG cooling and AFW supply		
FIRE AREA - ZONE CR FUNCTION - Decay Heat Removal			
a) loss of control to TDAFW, MAFW or SAFW systems	a) procedure for local operation of MAFW or SAFW pumps.		

TABLE 1

R. E. GINNA APPENDIX R INTERIM ACTIONS

FIRE AREA AND AFFECTED SAFE SHUTDOWN FUNCTION	PROPOSED ACTIONS		
	INTERIM PROCEDURE	FIRE PROTECTION MODIFICATION	OTHER
FIRE AREA - ZONE CR FUNCTION - Process Monitoring			
a) primary pressure	a-e) procedures to get local indication by wire cutting and termination of temporary instrument box near transmitter or containment penetration		
b) primary temperature			
c) pressurizer level			
d) SG pressure			
e) SG level			
f) CHG flow			f) pressurizer level adequate for RCS inventory. Charging flow not rqd.
g) TDAFW flow			g) SG level adequate for SG inventory monitoring. AFW flow not rqd.
h) source range			h) source range not rqd. for interim. Sampling can be used to monitor shutdown.

ATTACHMENT B

APPENDIX R AND OTHER PLANT MODIFICATION SCHEDULES

R. E. GINNA NUCLEAR POWER PLANT

ROCHESTER GAS AND ELECTRIC CORPORATION

APRIL 1984

An RG&E letter dated December 27, 1983 requested a schedular exemption for completion of plant modifications necessary to bring the plant into compliance with 10 CFR Part 50 Appendix R. Justification for the schedule extension was included with that letter. The information given here is intended to supplement that material.

The number of people involved in plant modifications was discussed in the December submittal. Over 250 people are scheduled to be on site during the 1984 refueling outage to perform only modification work. The 1984 outage is not atypical of recent past outages and reflects what RG&E expects to occur in the next several outages. These people are in addition to the normal plant complement and people required for refueling, maintenance, tests, overhaul, inspections, calibration and normal plant activities. The peak number of people on site during the 1983 refueling outage was 882 people. The weekly average number of people on site during the first six weeks of that outage (before systems were being restored for restart) varied from 740 to 831. The weekly averages during the current 1984 outage are similar. The number of people that can effectively work on site is limited by the vintage and size of the two loop PWR plant. Work space in an existing plant is often at a premium and security and job control conditions become complicated.

Table B1 is a listing of capital projects at Ginna which have been forecast for the years 1984 through 1987. The list includes modifications which are necessary to meet regulatory requirements as well as modifications initiated by RG&E to improve plant safety or operations. The identified forecast projects total more than $40 million for both 1984 and 1985 and are approximately $30 million for 1986 and 1987. The total forecast projects for these years rise steadily from $42 million to $60 million when the unidentified projects (projects as yet unspecified but which historically have arisen due to regulatory or other influences) are included. It is possible that some of the identified projects will be deferred. The list in Table B1 was developed for budget purposes. Some of the projects involve only analysis or work which does not include hardware changes at Ginna. However, the greatest amount of work which has been completed in any year in the past is approximately $30 million. In addition, more commitments have been made since this list was produced. Obviously, completion of even the identified projects in the next several years will be difficult. Although the limitations result from restrictions such as work space, proper job supervision and review and control of work procedures and authorizations, the total budget figures have proven to be representative of the limitations on the steel, concrete, cable and other modifications that can be built into the plant in any one year. Imposition of a schedule more restrictive than that presented in the exemption request will require that certain other modifications be displaced. Not all of the Appendix R modifications can be accelerated, however, because of the lead times for procurement of qualified equipment. Interim actions (identified in Attachment A of this letter) provide assurance of plant safe shutdown until the final Appendix R modifications are completed. Therefore, the proposed installation schedule is necessary, reasonable and adequate.

TABLE B1

FORECAST OF CAPITAL PROJECTS

1984 - 1987
(000'S)

W.O.	P.E.	DESCRIPTION	IN-SERV	1984	1985	1986	1987	TOTAL
ELECTRIC DEPT								
NUCLEAR GENERATION								
0-0	2- 0	RCP #1 SEAL LEAKOFF EWR - 3072	6/85	10	67	0	0	77
0-0	2- 0	FUEL TRANSFER TUBE FLANGE EWR - 2663	6/85	15	88	0	0	103
0-0	2- 0	CONTAINMENT GAS PENETRATION EWR - 3741	6/85	15	62	0	0	77
0-0	2- 0	CONTROL ACCESS VENT EWR - 3102	12/84	15	60	0	0	75
0-0	2- 0	METEORLOGICAL/RADIATION MONITORS	9/84	1019	0	0	0	1019
0-0	2- 0	CONTROL CONFIGURATION UPGRADE	12/86	633	769	951	0	2353
0-0	2- 0	RCP MOTOR - SPARE	3/85	809	660	0	0	1469
0-0	2- 0	PRESSURIZER BLOCK VALVES EWR - 3755	6/86	20	66	199	0	285
0-0	2- 0	ANI FIRE PROTECT. PHASE 1 EWR - 3132	6/85	25	108	0	0	133
0-0	2- 0	ANI FIRE PROTECT. PHASE II EWR - 3132	6/86	1	27	112	0	140
0-0	2- 0	NEW RADWASTE FACILITY EWR - 3083	12/87	144	549	2210	1385	4288
0-0	2- 0	RHR SUMP UPGRADE EWR - 3113	6/85	25	104	0	0	129
0-0	2- 0	SEISMOLOGY RE-EVALUATION EWR - 3669	6/85	40	33	0	0	73
0-0	2- 0	FUEL HANDELING EQUIPMENT EWR - 3690	6/85	18	83	0	0	101
0-0	2- 0	TSC A/C UPGRADE	6/84	101	0	0	0	101
21-1	2- 0	UPGRADE PLANT LICENSE	6/85	1659	609	0	0	2268
21-1	2- 0	GROUNDWATER LEVEL EWR - 3645	12/84	138	0	0	0	138
21-3	2- 0	ADMIN COMPUTER RELOCATION EWR - 3776	2/84	21	0	0	0	21
21-4	2- 0	SECURITY VEHICLE BARRIERS	2/84	60	0	0	0	60
22-0	2- 0	BLOCK WALLS EWR - 2486	6/85	511	429	0	0	940
22-1	2- 0	SOLENOID VALVES PHASE II EWR - 3260	6/84	225	0	0	0	225
22-3	2- 0	RCP ASS'Y AND SHAFT	7/84	697	627	0	0	1324
23-2	2- 0	RECOMBINER PIPING EWR - 2455	6/86	18	65	0	0	83
23-7	2- 0	FIRE PROTECTION EWR - 1832B	2/82	232	0	0	0	232
24-4	2- 0	HYDROGEN RECOM FLOW INSTR	5/84	29	0	0	0	29
24-8	2- 0	SPENT FUEL POOL COOLING PH II EWR -1594	3/86	279	2155	1517	0	3951
26-0	2- 0	SEISMIC QUAL HN CONTROL EWR - 3575	7/84	103	0	0	0	103
26-3	2- 0	RECORDS MANAGEMENT SYSTEM EWR - 3342	1/86	909	686	0	0	1595
26-7	2- 0	OVER PRESSURIZATION EWR - 1660	6/84	230	0	0	0	230
26-9	2- 0	AMMONIA ADDITION SYS EWR - 2145	2/84	247	0	0	0	247
27-3	2- 0	ENTRAINMENT SAMPLE SYS EWR - 2879	4/85	1	58	0	0	59
28-1	2- 0	CONTROL ROOM REVIEW EWR - 3264	6/85	367	399	50	0	816
30-2	2- 0	MSR UPGRADE PHASE II EWR - 3100	6/84	4366	0	0	0	4366
31-1	2- 0	RWST MODS (SEP) EWR - 3314	12/83	16	0	0	0	16
31-3	2- 0	NAOH TANKS EWR - 3572	2/84	48	0	0	0	48
31-9	2- 0	SEISMIC UPGRADE PHASE 7 EWR - 2512	6/84	3441	0	0	0	3441
31-9	2- 0	SEISMIC UPGRADE PHASE 8 EWR - 2512	6/85	1430	3627	0	0	5057
31-9	2- 0	INTER BLDG STRUCTURAL MODS EWR - 3582	6/84	1033	0	0	0	1033
32-3	2- 0	PLANT VENT EWR - 3751	4/84	152	0	0	0	152
32-9	2- 0	PENET. VENTS/DRAINS PHASE 3 EWR - 2507	6/84	102	0	0	0	102
33-8	2- 0	STEAM GENERATOR SNUBBERS EWR - 1483	6/86	29	792	1139	0	1960
34-1	2- 0	SERVICE WATER PUMPS EWR - 3316	6/84	296	0	0	0	296
35-2	2- 0	CONTROL ROOM HVAC PHASE I EWR - 3595	6/84	591	0	0	0	591
35-2	2- 0	CONTROL ROOM HVAC PHASE II EWR - 3595	6/85	50	206	0	0	256
35-9	2- 0	TECH. SUPPORT CENTER EWR - 2610	5/81	30	0	0	0	30

TABLE B1 (continued)

FORECAST OF CAPITAL PROJECTS

1984 - 1987
(000'S)

W.O.	P.E.	DESCRIPTION	IN-SERV	1984	1985	1986	1987	TOTAL
35-9	2- 0	TMI MODS-RV WATER LEVEL EWR - 2799	6/85	940	2668	0	0	3608
35-9	2- 0	TMI MODS - SAS HARDWARE #6376	6/85	794	1443	0	0	2237
35-9	2- 0	RAD WASTE SYS MOD PHASE II EWR - 3037	7/84	40	0	0	0	40
35-9	2- 0	POST ACCIDENT SAMPLING	7/83	160	0	0	0	160
36-9	2- 0	CONTAINMENT PURGE VALVES EWR - 2504	6/85	125	1464	0	0	1589
37-3	2- 0	BLOWDOWN VALVE RESTRAINT EWR - 3674	6/84	50	0	0	0	50
38-1	2- 0	DEDICATED SHUTDOWN SYSTEM EWR - 3313	6/86	912	2679	2315	0	5906
38-3	2- 0	CONTROL OF HEAVY LOADS EWR - 3059	4/84	321	0	0	0	321
44-3	2- 0	RELAY ROOM HALON FANS EWR - 3729	6/84	74	0	0	0	74
45-1	2- 0	S/G SLEEVING PHASE 1 EWR - 2714	6/83	100	0	0	0	100
45-1	2- 0	S/G SLEEVING PHASE 2 EWR - 2714	6/84	1446	500	0	0	1946
45-1	2- 0	S/G SLEEVING PHASE 3 EWR - 2714	6/85	510	9711	0	0	10221
45-1	2- 0	S/G SLEEVING PHASE 4 EWR - 2714	6/86	1	0	9690	500	10191
45-1	2- 0	S/G SLEEVING PHASE 5 EWR - 2714	6/87	1	0	0	9690	9691
45-3	2- 0	HP TURBINE UPGRADE	6/86	32	24	2518	0	2574
49-3	2- 0	AUX BLDG JET SHEILDS EWR - 3691	6/85	15	36	0	0	51
53-1	2- 0	FEEDWATER ELBOWS EWR - 2469	7/84	211	0	0	0	211
53-1	2- 0	FEEDWATER ELBOWS EWR - 2469B	6/85	50	257	0	0	307
53-2	2- 0	STRUCTRAL REANALYSIS EWR - 3296	12/87	3850	6894	6690	10882	28316
53-3	2- 0	SPENT FUEL POOL RERACK EWR - 3666	3/85	1216	403	0	0	1619
54-1	2- 0	PLANT PROCESS COMPUTER REPLACEMENT -3272	6/85	827	1196	0	0	2023
54-3	2- 0	SIMULATOR BUILDING EWR - 3882	11/84	1330	240	0	0	1570
54-3	2- 0	PLANT SIMULATOR EWR - 3786	2/87	2883	4855	1831	799	10368
55-2	2- 0	BORIC ACID PIPING PHASE I EWR - 3092	6/85	284	598	0	0	882
55-2	2- 0	BORIC ACID PIPING PHASE II EWR - 3092	6/86	1	139	589	0	729
55-3	2- 0	RMS SYSTEM UPGRADE	5/84	69	0	0	0	69
57-3	2- 0	COUNT ROOM A/C EWR - 3752	1/84	40	0	0	0	40
60-3	2- 0	CONTROL BLDG HVAC	6/84	212	0	0	0	212
61-3	2- 0	40 TON CRANE UPGRADE EWR - 3651	9/84	285	0	0	0	285
64-3	2- 0	FSAR UPDATE	2/85	1324	114	0	0	1438
91-3	2- 0	MAIN TRANSFORM. VENT EWR - 1606	6/84	204	0	0	0	204
0-0	2- 1	EDDY CURRENT INSTRUMENTATION	2/84	79	0	0	0	79
0-0	2- 2	DRIVEWAY / STORAGE AREA PAVING	8/84	75	0	0	0	75
0-0	2- 3	DCA NODE EOF/SEC	12/84	40	0	0	0	40
0-0	2- 5	SI PUMP RECIRC.	6/85	50	464	0	0	514
47-3	2- 6	DB-50 REPLACEMENT/SPARES EWR - 3069	8/84	440	0	0	0	440
0-0	2- 7	CABLE TRAY SEISMIC UPGRADE EWR - 3695	7/85	253	77	0	0	330
62-3	2- 8	D/G BREAKERS & AUX. SPARES EWR - 3693	7/85	101	212	0	0	313
0-0	2- 9	CIRCUIT SCHEDULE DBMS	12/84	50	0	0	0	50
0-0	2-11	PLANT SECURITY EWR - 3733	6/85	50	105	0	0	155
0-0	2-12	FUEL HANDLING BRIDGE EWR - 1839	6/85	15	27	0	0	42
0-0	2-15	UPGRADE 'B' SHAFT	12/84	356	0	0	0	356
63-3	2-16	SALEM ATWS REACTOR TRIP MOD EWR - 3698	6/85	142	171	0	0	313
0-0	2-17	INTAKE STRUCTURE SCREENS	6/87	1	0	0	103	104
22-4	2-18	TRANSFORMER TEMP. MONITOR	5/84	45	0	0	0	45
0-0	2-19	TURBINE BLDG ROOF REPLACEMENT	6/84	175	0	0	0	175
0-0	2-26	862A / 862B REPLACEMENT	6/86	25	64	199	0	288
54-2	2-29	INCORE THERMOCOUPLE CONNECT. EWR - 3744	6/84	97	0	0	0	97
0-0	2-30	AUX FW TURBINE TRIP ATNS MOD	7/86	50	112	164	0	326

TABLE B1 (continued)

FORECAST OF CAPITAL PROJECTS

1984 - 1987
(000'S)

W.O.	P.E.	DESCRIPTION	IN-SERV	1984	1985	1986	1987	TOTAL
0-0	2-31	ROD POS IND SYS EWR - 3797	7/86	901	218	582	0	1701
0-0	2-33	VITAL BATTERY REP EWR - 3891	7/85	50	106	0	0	156
0-0	2-34	INCORE THERMOCOUPLE SYS UPGRADE	7/86	101	119	219	0	439
0-0	2-35	GINNA ROOF REPLACEMENT PH1	12/85	0	122	0	0	122
0-0	2-36	GINNA ROOF REPLACEMENTS PH2	12/86	0	0	106	0	106
0-0	2-37	GINNA ROOF REPLACEMENTS PH3	12/87	0	0	0	85	85
0-0	2-41	LOW LEVEL BETA COUNTING EQUIP	6/85	0	31	0	0	31
0-0	2-45	S/G RECIRC CLEANUP SYSTEM	6/85	0	179	0	0	179
0-0	2-46	COMPUTER INPUT TIE-INS	6/85	0	51	0	0	51
0-0	2-47	1A/2A 1B/2B FW HEATER REPLACEMENT	12/87	0	0	0	687	687
0-0	2-50	NUCLEAR PROD - BLDGS & EQUIP - MINOR	0/00	725	761	808	857	3151
0-0	2-53	STA. 13 #1 TRANSF. AUX. COOLER	5/84	60	0	0	0	60
0-0	2-53	SECURITY COMPUTER REPLACEMENT	12/86	0	0	528	0	528
0-0	2-54	EXPLOSIVE DETECTORS REPLACEMENT	6/86	0	0	102	0	102
0-0	2-57	X-RAY MACHINE	6/86	0	0	51	0	51
0-0	2-90	UNIDENTIFIED MAJOR PROJECTS - NUCLEAR	0/00	0	1658	22532	32130	56320
TOTAL NUCLEAR GENERATION				42388		53102		206077
					50027		58560	