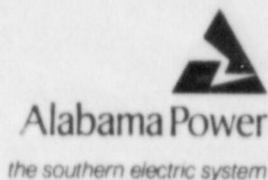


Alabama Power Company
600 North 18th Street
Post Office Box 2641
Birmingham, Alabama 35291-0400
Telephone 205 250-1835

R. P. McDonald
Senior Vice President



December 23, 1986

Docket No. 50-364

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. L. S. Rubenstein

Gentlemen:

Joseph M. Farley Nuclear Plant - Unit 2
NUREG-0737, Item II.K.3.17 Report on
Outages of Emergency Core Cooling Systems (ECCS)

By letter of February 13, 1981, Alabama Power Company committed to report to the NRC every five years the results of Alabama Power Company's review of the Unit 2 ECCS outages which resulted in limiting conditions for operation as defined by the Technical Specifications. Attached is the required listing of Unit 2 ECCS outages since May 1, 1981. It should be noted that outages of ECCS equipment during modes of operation in which this equipment is not required by Technical Specifications are not included in this report.

If you have any questions, please advise.

Respectfully submitted,

R. P. McDonald

RPM/JAR:dst-D-T.S.4

Attachment

cc: Mr. L. B. Long
Dr. J. N. Grace
Mr. E. A. Reeves
Mr. W. H. Bradford

8612310058 861223
PDR ADOCK 05000364
R PDR

Av46
1/1

bc: Mr. W. O. Whitt
Mr. W. G. Hairston, III
Mr. K. W. McCracken
Mr. J. D. Woodard
Mr. J. W. McGowan
Mr. C. D. Nesbitt
Mr. R. G. Berryhill
Mr. D. E. Mansfield
Mr. J. A. Ripple
Mr. J. K. Osterholtz
Mr. J. T. Brantley
Mr. D. E. Dutton
Mr. J. R. Crane
Mr. K. C. Gandhi

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	End of Event Time	End of Event Date	System	Duration (Hours)	Cause and Corrective Action
1050	6/10/81	1458	6/12/81	RWST	52.1	"A" and "B" Train RWST level switches deenergized for replacement and recalibration.
1050	6/22/81	133	6/22/81	BIT	2.67	Voluntarily opened supply breaker to MOV 8801B to repair MCB indication for "B" train BIT outlet.
0958	6/24/81	1006	6/24/81	Chg. Pump	.13	Loss of suction on 2B charging pump due to VCT outlet valve being closed. Reopened valve and started charging pump.
1825	8/1/81	0510	8/2/81	RWST	10.75	RWST Level indicator failed high due to moisture entering suction transmitter junction box. Box was dried out and sealed.
1830	8/6/81	0800	8/8/81	RWST	13.5	RWST Level indicator failed high. Component drift in transmitter, transmitter recalibrated.
0045	8/9/81	1330	8/9/81	BIT	12.75	"A" Train BIT heat tracing tagged out for maintenance.
1245	8/18/81	1300	8/20/81	RWST	48.25	RWST Level indicator failed high. Replaced D.C. Amplifier and calibration cards in level transmitter.
2300	8/20/81	1335	8/21/81	BIT	14.58	"A" Train BIT heat tracing supply breaker tripped due to faulty ground connection on the power supply transformer. Connection repaired - BIT heat tracing was returned to service.
2035	9/2/81	2108	9/2/81	RHR	.5	2B RHR pump removed from service for surveillance testing.
0000	9/18/81	0930	9/18/81	Chg. Pump	9.5	2A Charging pump removed from service for work to be performed on CCW System.
0335	9/19/81	0440	9/19/81	RHR	1.05	2A RHR pump removed from service to perform STP-11.9.
1325	9/19/81	1335	9/19/81	RHR	.17	2A RHR pump removed from service to perform STP-11.9.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
2345	11/5/81	2358	11/5/81	Chg. Pump	.25	2C Charging pump breaker racked out for maintenance.
0410	11/16/81	0425	11/16/81	RHR	.25	2B RHR pump racked out for meggering.
0555	11/16/81	0608	11/16/81	RHR	.25	2A RHR pump racked out for meggering.
1020	11/17/81	1030	11/17/81	RHR	.17	2A RHR pump removed from service to perform STP-11.8.
1032	11/17/81	1045	11/17/81	RHR	.18	2B RHR pump removed from service to perform STP-11.8.
0921	11/24/81	1410	11/24/81	RHR	4.8	2A RHR Train removed from service to perform LLRT on CTMT sump recirculation line.
1435	11/24/81	1915	11/24/81	RHR	4.67	2B RHR Train removed from service to perform LLRT on CTMT sump recirculation line.
1239	12/10/81	1301	12/10/81	Chg. Pump	.33	2C Charging pump removed from service to perform STP-4.3.
0930	12/24/81	0943	12/24/81	RHR	.22	2A RHR pump removed from service to perform STP-11.9.
0944	12/24/81	0953	12/24/81	RHR	.1	2B RHR pump removed from service to perform STP-11.10.
1615	12/28/81	1634	12/28/81	BIT	.33	"A" Train BIT heat tracing inoperable due to blown control power fuse. The fuse was replaced and the "A" Train BIT heat tracing was returned to service.
0945	1/12/82	1404	1/12/82	RWST	4.33	RWST level indicator LI4075B failed low. The exposed diaphragm on LS 504 ruptured due to freezing. Replaced level switch and returned instrumentation loop to service.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
0915	1/11/82	1215	1/12/82	BIT	27.0	Boron concentration in BIT below Tech. Spec. minimum due to inadvertent safety injection. Boric acid batched to raise concentration.
1456	2/21/82	1536	2/21/82	RHR	0.67	2A RHR pump removed from service for lubrication.
1340	2/22/82	1432	2/22/82	RHR	0.87	2B RHR pump removed from service for lubrication.
2308	2/28/82	1955	3-1-82	BIT	21	Boron Concentration in BIT out of spec low due to safety injection. Boric acid batched to raise concentration and the boron concentration was returned to minimum Tech. Spec. req.
2040	3/2/82	0134	3/3/82	Chg. Pump	4.9	2A Charging pump removed from service for lubrication.
0215	3/18/82	0625	3/19/82	BIT	28.2	"A" Train BIT heat tracing inoperable due to the failure of two circuits caused by heat build up in the electrical cabinets. The P/C controller cards were replaced.
0445	3/19/82	0505	3/19/82	RHR	.3	2A RHR pump removed from service to perform STP-11.1.
1630	3/22/82	1645	3/22/82	Chg. Pump	.3	2A Charging pump removed from service for testing.
0820	3/23/82	0907	3/23/82	RHR	.75	2A RHR pump removed from service to perform STP-11.9.
1635	3/23/82	1655	3/23/82	RHR	.3	2B RHR pump removed from service to perform STP-11.10.
1025	3/29/82	1105	3/29/82	Chg. Pump	.7	2A Charging pump removed from service for testing.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1815	4/8/82	1830	4/8/82	RHR	.25	2B RHR pump removed from service for testing.
0007	4/19/82	0135	4/19/82	Chg. Pump	1.5	2A Charging pump removed from service to perform STP-4.4.
0130	4/20/82	0520	4/20/82	RHR	3.8	"A" and "B" Trains of the RHR system removed from service one at a time to perform STP-11.6.
0530	4/23/82	0545	4/23/82	RHR	.25	2A RHR pump removed from service to perform STP-11.9.
0600	4/23/82	0610	4/23/82	RHR	.15	2B RHR pump removed from service to perform STP-11.10.
0825	5/17/82	0955	5/17/82	RHR	1.5	"A" Train RHR System removed from service to perform STP-11.8.
1535	5/18/82	1553	5/18/82	RHR	.3	"A" Train RHR System removed from service to perform STP-11.8.
1554	5/18/82	1605	5/18/82	RHR	.2	"B" Train RHR system removed from service to perform STP-11.8.
1658	5/19/82	1730	5/19/82	Chg. Pump	.5	2A Charging pump breaker DF06 closing spring failed. Repaired contacts on closing arm spring.
1530	5/23/82	1615	5/23/82	RHR	.8	"B" Train RHR System removed from service to perform STP-11.8.
0930	6/1/82	1030	6/1/82	RHR	1.0	2B RHR pump removed from service to perform STP-11.2.
0415	6/19/82	0450	6/19/82	RHR	.6	2A RHR pump removed from service to perform STP-11.1.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
0835	7/19/82	0850	7/19/82	RHR	.3	2A RHR pump removed from service to perform STP-11.9.
0938	7/20/82	1020	7/20/82	RHR	.7	"A" Train RHR system removed from service to perform STP-11.6.
1025	7/20/82	1050	7/20/82	RHR	.4	"B" Train RHR system removed from service to perform STP-11.6.
0950	8/1/82	1005	8/1/82	RHR	.3	2B RHR pump removed from service to perform STP-11.10.
0010	8/17/82	0020	8/17/82	Chg. Pump	.2	2A Charging pump racked out to megger breaker.
1925	8/17/82	1936	8/17/82	RHR	.2	2A RHR pump system removed from service to perform STP-11.9.
2030	8/17/82	0137	8/19/82	RHR	30	"B" Train RHR system removed from service to perform maintenance on miniflow orifice and isolation valve.
1000	8/20/82	1015	8/20/82	RHR	.25	2B RHR pump removed from service to perform STP-11.10.
1110	8/20/82	1325	8/20/82	RHR	2.25	2A RHR pump removed from service for lubrication.
0529	9/19/82	0549	9/19/82	Chg. Pump	.3	2A Charging pump removed from service to perform STP-4.1.
0915	9/19/82	0940	9/19/82	Chg. Pump	.5	2A Charging pump removed from service to perform STP-4.1.
0400	10/2/82	0510	10/2/82	RHR	1.1	2B RHR pump removed from service to perform STP-11.10.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
0750	10/8/82	0830	10/8/82	ACC	.7	2B Accumulator inoperable while working PI-927 due to erratic indication.
0526	10/19/82	0541	10/19/82	RHR	.25	2A RHR pump removed from service to perform STP-11.9.
1237	12/4/82	1317	12/4/82	RHR	0.67	2B RHR pump removed from service to perform STP-11.2.
0230	1/17/83	0330	1/17/83	RHR	1.0	2A RHR Pump removed from service to perform STP-11.9.
0300	1/17/83	2030	1/17/83	RHR	17.5	"A" Train RHR MOV 8888B would not open after it was closed. This event was due to loose contacts in the valve limit switch. The contacts were replaced & syst. returned to service.
2015	2/17/83	2106	2/17/83	RHR	.9	2B RHR Pump removed from service for lubrication.
2145	2/17/83	2235	2/17/83	RHR	.8	2A RHR pump removed from service for lubrication.
0348	2/19/83	0514	2/19/83	Chg. Pump	1.4	2C Charging pump was declared inoperable when it failed to meet lube oil pressure criteria per STP-4.3.
0050	2/28/83	0340	2/28/83	RHR	2.8	2A RHR pump removed from service to perform STP-11.3.
1232	3/1/83	1440	3/01/83	RHR	2.1	2B RHR pump removed from service to perform STP-11.4.
1350	4/13/83	2140	4/13/83	Chg. Pump	7.8	2C Charging pump removed from service for lubrication.
1315	4/17/83	1340	4/17/83	RHR	.4	2A RHR Pump removed from service to perform STP-11.9.

LISTING OF ECCS OUTAGES

Start of Event Time Date	End of Event Time Date	System	Duration (Hours)	Cause and Corrective Action
1350 4/17/83	1425 4/17/83	RHR	.6	2B RHR Pump removed from service to perform STP-11.10.
1552 5/5/83	1632 5/5/83	Chg. Pump	.7	2C Charging pump removed from service to perform STP-4.3.
1625 5/20/83	1955 5/20/83	RHR	3.5	2A RHR pump removed from service to perform STP-11.1 and STP-11.8.
0110 5/21/83	0156 5/21/83	RHR	.8	2B RHR pump removed from service to perform STP-11.8 and STP-11.10.
0847 6/1/83	1005 6/1/83	RHR	1.25	2B RHR pump removed from service to perform STP-11.2.
0910 6/5/83	1030 6/5/83	Chg. Pump	1.33	2C Charging Pump removed from service to perform STP-4.6.
0950 6/17/83	1006 6/17/83	RHR	.25	2A RHR pump removed from service to perform STP-11.9.
1105 6/17/83	1116 6/17/83	RHR	.16	2B RHR pump removed from service to perform STP-11.10.
1000 7/17/83	1025 7/17/83	RHR	.42	2A RHR pump removed from service to perform STP-11.9.
1040 7/17/83	1055 7/17/83	RHR	.25	2B RHR pump removed from service to perform STP-11.10
1415 8/20/83	1426 8/20/83	RHR	0.18	2A RHR pump removed from service to perform STP-11.9.
1539 8/20/83	1836 8/20/83	RHR	2.95	2B RHR pump removed from service to perform STP-11.10.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
0355	8/21/83	1000	8/21/83	RHR	6.08	2A RHR pump removed from service for lubrication.
1006	8/21/83	1019	8/21/83	RHR	0.22	2A RHR pump removed from service to perform STP-11.8.
1025	8/21/83	1048	8/21/83	RHR	0.38	2B RHR pump removed from service to perform STP-11.8.
1128	8/21/83	1235	8/21/83	RHR	1.1	2B RHR pump inoperable due to variable resistor in the breaker closing spring charging motor circuit being out of adjustment. Resistor re-adjusted and proper breaker operation verified.
1349	8/21/83	1406	8/21/83	RHR	0.28	2A RHR pump removed from service to perform STP-11.1.
1306	9/1/83	1351	9/1/83	RHR	0.75	2B RHR pump removed from service to perform STP-11.2.
1017	9/4/83	1056	9/4/83	Chg. Pump	0.65	2C Charging pump removed from service to perform GMP-12 and GMP-7.
1034	9/5/83	1100	9/5/83	Chg. Pump	0.43	2C Charging pump removed from service to perform STP-4.3.
0257	9/13/83	0400	9/13/83	RHR	1.05	2A RHR pump removed from service to perform STP-11.1.
0955	9/16/83	1009	9/16/83	RHR	0.23	2A RHR pump removed from service to perform STP-11.9.
1030	9/16/83	1037	9/16/83	RHR	0.12	2B RHR pump removed from service to perform STP-11.10.
0825	9/17/83	0842	9/17/83	ACC	0.28	2A Accumulator removed from service to perform STP-32.0.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
0550	10/22/83	0629	10/22/83	RHR	0.57	2A RHR pump removed from service to perform STP-11.9.
0030	10/31/83	0120	10/31/83	RHR	0.83	"A" and "B" Trains of the RHR system removed from service one at a time to perform STP-11.6.
2033	11/13/83	2046	11/13/83	RHR	0.22	2B RHR pump removed from service to perform STP-11.10.
0216	11/17/83	0301	11/17/83	RHR	0.75	2A RHR pump removed from service to perform STP-11.1.
1040	11/18/83	1100	11/18/83	RHR	0.33	2A RHR pump removed from service to megger motor.
0910	12/5/83	0940	12/5/83	Chg. Pump	0.30	2C Charging pump removed from service to perform STP-4.3.
2200	12/11/83	2240	12/11/83	RHR	0.67	2B RHR pump removed from service to perform STP-11.10.
1705	12/16/83	1759	12/16/83	RHR	0.90	2A RHR pump removed from service to perform STP-11.9.
0800	12/28/83	1448	12/28/83	Chg. Pump	6.80	2C Charging pump removed from service for breaker PM.
0620	12/29/83	0625	12/29/83	RHR	0.08	2A RHR pump removed from service to perform STP-11.9.
0720	12/29/83	1520	12/29/83	RHR	8.0	2B RHR pump removed from service for breaker PM.
0155	1/11/84	0230	1/11/84	RHR	0.58	2B RHR pump removed from service to perform STP-11.2.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
1942	1/16/84	1956	1/16/84	RHR	0.23	2A RHR pump removed from service to perform STP-11.9.
0530	1/20/84	0635	1/20/84	RHR	1.08	"A" and "B" Trains of the RHR system removed from service one at a time to perform STP-11.6.
0730	1/31/84	1325	1/31/84	RHR	5.92	2A RHR pump removed from service to perform MP-28.109.
1032	2/6/84	1310	2/6/84	RHR	2.63	2A RHR pump removed from service to perform STP-11.3.
2040	2/6/84	2145	2/6/84	RHR	1.08	2B RHR pump removed from service for lubrication.
2220	2/6/84	2229	2/6/84	RHR	0.15	2B RHR pump removed from service to perform STP-11.10.
0023	2/7/84	0500	2/7/84	RHR	4.62	2A RHR pump removed from service for lubrication.
0830	2/17/84	0848	2/17/84	RHR	0.30	"A" Train RHR system removed from service to perform STP-11.8.
0850	2/17/84	0912	2/17/84	RHR	0.37	"B" Train RHR system removed from service to perform STP-11.8.
1010	3/5/84	1055	3/5/84	RHR	0.75	2A RHR pump removed from service to perform STP-11.9.
2307	4/3/84	2326	4/3/84	RHR	0.32	2B RHR pump removed from service to perform STP-11.2.
0757	4/4/84	1214	4/4/84	Chg. Pump	4.28	2C Charging pump removed from service for lubrication.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
1543	4/5/84	1555	4/5/84	RHR	0.20	2A RHR pump removed from service to perform STP-11.9.
1235	4/19/84	1310	4/19/84	RHR	0.58	"A" Train RHR system removed from service to perform STP-11.6.
1313	4/19/84	1345	4/19/84	RHR	0.52	"B" Train RHR system removed from service to perform STP-11.6.
1849	6/3/84	1901	6/3/84	RHR	0.20	2A RHR pump removed from service to perform STP-11.9.
1000	6/4/84	1128	6/4/84	RHR	1.47	2B RHR pump removed from service to perform STP-11.10
1025	6/4/84	1316	6/4/84	Chg. Pump	2.85	2C Charging pump removed from service to perform STP-4.6.
0059	6/26/84	0109	6/26/84	RHR	0.17	2A RHR pump removed from service to perform STP-11.9.
0314	6/26/84	0835	6/27/84	RHR	29.35	2B RHR pump removed from service for implementation of PCN.
0048	6/28/84	0108	6/28/84	RHR	0.33	2B RHR pump removed from service to perform STP-11.10.
0231	6/28/84	1701	6/28/84	RHR	14.50	2A RHR pump removed from service for implementation of PCN.
0212	7/5/84	0435	7/5/84	Chg. Pump	2.38	2C Charging pump removed from service for lubrication.
1108	7/5/84	1154	7/5/84	RHR	0.77	2B RHR pump removed from service to perform STP-11.2.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
0742	7/19/84	1320	7/19/84	RHR	5.5	"B" Train RHR system removed from service to perform STP-11.6.
1345	7/19/84	1840	7/19/84	RHR	5	"A" Train RHR system removed from service to perform STP-11.6.
0808	8/5/84	0819	8/5/84	RHR	0.2	2B RHR pump removed from service to perform STP-11.10.
1010	8/5/84	1103	8/5/84	RHR	0.7	2A RHR pump removed from service to perform STP-11.1.
1824	8/12/84	1844	8/12/84	RHR	0.3	"A" Train RHR system removed from service to perform STP-11.8.
1847	8/12/84	1903	8/12/84	RHR	.3	"B" Train RHR system removed from service to perform STP-11.8
2115	8/31/84	2348	8/31/84	RHR	2.5	"B" Train RHR system placed on recirculation to obtain boron sample.
2350	8/31/84	0218	9/1/84	RHR	1.5	"A" Train RHR system placed on recirculation to obtain boron sample.
0125	9/5/84	0141	9/5/84	RHR	0.27	2A RHR pump removed from service to perform STP-45.1.
0251	9/5/84	0314	9/5/84	RHR	0.38	2B RHR pump removed from service to perform STP-45.1.
0110	9/28/84	0420	9/28/84	Chg. Pump	3.2	2C Charging pump removed from service to replace oil filter.
1626	9/28/84	1639	9/28/84	RHR	0.2	2A RHR Pump removed from service to perform STP-11.9

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
0800	10/4/84	1354	10/4/84	Chg. Pump	5.9	2C Charging pump removed from service for lubrication.
1308	10/19/84	1451	10/19/84	RHR	1.7	2B RHR pump removed from service to perform STP-11.4.
1234	10/28/84	1255	10/28/84	RHR	0.35	2A RHR pump removed from service to perform STP-11.9.
1002	11/3/84	1020	11/3/84	RHR	0.3	2A RHR pump removed from service to perform STP-11.1.
1807	11/3/84	1823	11/3/84	RHR	0.3	2B RHR pump removed from service to perform STP-11.10.
1021	11/14/84	1037	11/14/84	RHR	0.3	"A" and "B" Trains of the RHR system removed from service one at a time to perform STP-11.8.
0914	12/3/84	0921	12/3/84	RHR	0.1	2A RHR pump removed from service to perform STP-11.9
0930	12/3/84	0946	12/3/84	RHR	0.3	2B RHR pump removed from service to perform STP-11.10
0914	12/4/84	1057	12/4/84	Chg. Pump	1.7	2C Charging pump removed from service to perform STP-4.3.
0906	12/27/84	1044	12/27/84	RHR	1.6	2A RHR pump removed from service to perform STP-11.9.
1127	12/27/84	1800	12/27/84	RHR	6.5	2B RHR pump removed from service for lubrication.
1350	1/4/85	1429	1/4/85	RHR	0.6	"A" Train RHR system placed on recirculation to obtain boron sample.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1540	1/4/85	1602	1/4/85	RHR	0.4	"B" Train RHR system placed on recirculation to obtain boron sample.
1054	1/5/85	1102	1/5/85	ACC	0.1	2A Accumulator removed from service to perform STP-32.0.
1108	1/5/85	1112	1/5/85	ACC	0.07	2B Accumulator removed from service to perform STP-32.0.
1118	1/5/85	1124	1/5/85	ACC	0.1	2C Accumulator removed from service to perform STP-32.0.
2023	1/9/85	1139	1/10/85	ACC	15.3	2A Accumulator removed from service for maintenance on check valve V037A.
1300	1/18/85	0400	1/22/85	RHR	87.0	"A" Train RHR tagged out to pull suction and discharge relief valve for bench testing.
0323	3/7/85	0405	3/7/85	RHR	0.7	"A" Train RHR system removed from service to perform STP-11.8.
0407	3/7/85	0432	3/7/85	RHR	0.4	"B" Train RHR system removed from service to perform STP-11.8.
1657	3/11/85	1939	3/11/85	RHR	2.7	"B" Train RHR system placed on recirculation to obtain boron sample.
1955	3/11/85	2239	3/11/85	RHR	2.7	"A" Train RHR system placed on recirculation to obtain boron sample.
1310	3/18/85	1431	3/18/85	RHR	1.4	"A" Train RHR system placed on recirculation to obtain boron sample.
1449	3/18/85	1539	3/18/85	RHR	0.8	"B" Train RHR system placed on recirculation to obtain boron sample.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1725	3/25/85	1741	3/25/85	RHR	0.3	2A RHR pump removed from service to perform STP-11.9.
0140	3/30/85	0205	3/30/85	RHR	0.4	2B RHR pump removed from service to perform STP-11.10.
1000	3/31/85	1012	3/31/85	RHR	0.2	2B RHR pump removed from service to perform STP-11.10.
0308	4/5/85	0420	4/5/85	RHR	0.2	2B RHR pump removed from service to perform STP-11.2.
2210	4/25/85	2223	4/25/85	RHR	0.2	2A RHR pump removed from service to perform STP-11.9.
1059	5/3/85	1145	5/3/85	RHR	0.8	2A RHR pump removed from service to perform STP-11.1
1004	5/5/85	1042	5/5/85	RHR	0.6	2B RHR pump removed from service to perform STP-11.10.
1636	5/7/85	1653	5/7/85	Chg. Pump	0.3	2C Charging pump breaker DG06 removed from service for inspection.
1508	5/8/85	1554	5/8/85	RHR	0.8	2A RHR pump removed from service to perform STP-11.9.
1603	5/8/85	1720	5/8/85	RHR	1.3	2B RHR pump removed from service for breaker inspection.
1011	5/9/85	1016	5/9/85	RHR	0.1	2B RHR pump removed from service to perform STP-11.10.
1030	5/9/85	1537	5/9/85	RHR	5.1	2A RHR pump removed from service for breaker inspection.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1535	5/9/85	1537	5/9/85	RHR	0.03	2A RHR pump removed from service to perform STP-11.9.
0844	5/13/85	1822	5/13/85	Chg. Pump	9.5	2C Charging pump removed from service for lubrication.
2212	5/21/85	2325	5/21/85	RHR	1.2	"A" and "B" trains of the RHR system removed from service one at a time to perform STP-11.6.
1630	5/22/85	2232	5/22/85	Chg. Pump	6.0	Closed Charging pump suction MOV-8131A to check torque setting and dual indication problem. 2C Charging pump removed to prevent auto start w/o suction
2056	5/25/85	2115	5/25/85	RHR	0.6	2A RHR pump removed from service to perform STP-11.9.
0532	6/4/85	0541	6/4/85	RHR	0.2	2A RHR pump removed from service to perform STP-11.9.
0605	6/4/85	1952	6/5/85	RHR	27	"B" Train RHR system inoperable due to FT-605B being tagged out.
0140	6/5/85	0240	6/5/85	Chg. Pump	1.0	2C Charging pump removed from service to perform STP-4.3.
0524	6/6/85	1543	6/7/85	RHR	34.3	"A" Train RHR inoperable due to FT-605A being tagged out.
2000	6/7/85	0430	6/8/85	RHR	8.5	2B RHR Pump removed from service for lubrication.
0420	6/8/85	0430	6/8/85	RHR	0.2	2B RHR pump removed from service to perform STP-11.10.
0156	7/1/86	0207	7/1/85	RHR	0.2	2B RHR Pump removed from service to perform STP-11.2.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1436	7/3/85	1533	7/3/85	RHR	0.95	2A RHR pump removed from service to perform STP-11.9.
0858	7/9/85	0921	7/9/85	RHR	0.4	2B RHR pump removed from service to perform STP 11.10.
0945	7/9/85	1510	7/9/85	RHR	5.4	2A RHR pump removed from service to work limit switch grease on mini flow.
0751	7/13/85	1820	7/13/85	Chg. Pump	10.5	2C Charging Pump breaker tagged out to grease coupling and change limit switch grease on mini flow.
0312	7/23/85	0333	7/23/85	RHR	0.4	2B RHR pump removed from service to perform STP-11.10.
1623	7/23/85	1654	7/23/85	RHR	0.5	2A RHR pump removed from service to perform STP-11.9.
1712	7/23/85	2345	7/23/85	RHR	6.5	2B RHR pump removed from service to prevent damage while stroking miniflow valve 602B.
0058	8/9/85	0212	8/9/85	RHR	1.2	2B RHR pump removed from service to perform STP-11.10.
0230	8/9/85	1145	8/9/85	RHR	9.3	2A RHR pump removed from service for lubrication and STP-11.1.
2104	8/21/85	2119	8/21/85	RHR	0.3	"A" Train RHR system removed from service to perform STP-11.6.
2123	8/21/85	2148	8/21/85	RHR	0.4	"B" Train RHR system removed from service to perform STP-11.6.
1611	9/7/85	1655	9/7/85	RHR	0.7	"A" Train RHR system removed from service to perform STP-11.8.

LISTING OF ECCS OUTAGES

Start of Event Time	End of Event Date	Time	Date	System	Duration (Hours)	Cause and Corrective Action
2119	9/7/85	2134	9/7/85	RHR	0.3	"A" Train RHR system removed from service to perform STP-11.8.
2135	9/7/85	2144	9/7/85	RHR	0.2	"B" Train RHR system removed from service to perform STP-11.8.
0857	9/9/85	1002	9/9/85	RHR	1.1	2A RHR pump removed from service to perform STP-11.9
1148	9/9/85	1254	9/9/85	RHR	1.1	2B RHR pump removed from service to perform STP-11.10.
1340	9/29/85	1451	9/29/85	RHR	1.2	2B RHR pump removed from service to perform STP-11.4.
1552	10/6/85	1601	10/6/85	RHR	0.15	2A RHR pump removed from service to perform STP-11.9.
1144	10/9/85	1154	10/9/85	RHR	0.16	2B RHR pump removed from service to perform STP-11.2.
1315	10/29/85	1338	10/29/85	RHR	.45	2B RHR pump removed from service to perform STP-11.10.
2113	11/3/85	2212	11/3/85	RHR	1	2A RHR pump removed from service to perform STP-11.1.
1724	11/6/85	0054	11/7/85	Chg. Pump	7.5	2C Charging pump removed from service for lubrication.
0125	12/3/85	0146	12/3/85	RHR	.2	2A RHR pump removed from service to perform STP-11.9.
0150	12/8/85	0214	12/8/85	RHR	.4	"A" Train RHR system removed from service to perform STP-11.8.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
0215	12/8/85	0245	12/8/85	RHR	.5	"B" Train RHR system removed from service to perform STP-11.8.
1008	12/15/85	0425	12/16/85	Chg. Pump	18.3	2C Charging pump taken out to allow cleaning of the lube oil cooler.
0850	12/26/85	0948	12/26/85	RHR	1	2B RHR pump removed from service to perform STP-11.2.
0904	1/2/86	1034	1/2/86	RHR	1.5	2A RHR pump removed from service to perform STP-11.9.
1704	1/6/86	1822	1/6/86	Chg. Pump	1.3	2C Charging pump removed from service to perform STP-4.3.
1900	3/7/86	1921	3/7/86	RHR	.4	"A" Train RHR system removed from service to perform STP-11.8.
1922	3/7/86	2006	3/7/86	RHR	.7	"B" Train RHR system removed from service to perform STP-11.8.
0120	3/11/86	0440	3/11/86	Chg. Pump	3.3	2A Charging pump removed from service to inspect breaker.
1411	3/11/86	1638	3/11/86	RHR	2.5	"B" Train RHR system removed from service for maintenance.
1540	3/13/86	0110	3/14/86	RHR	9.5	"A" Train RHR heat exchanger removed from service for maintenance.
0825	3/16/86	0930	3/16/86	RHR	1.1	Shut MOV 8888A "B" Train RHR discharge valve to verify operability of "B" pump prior to removing "A" Train RHR for maintenance.
0945	3/16/86	1442	3/16/86	RHR	4.9	"A" Train RHR system removed from service for calibration of miniflow transmitter.

LISTING OF ECCS OUTAGES

Start of Event Time	Date	End of Event Time	Date	System	Duration (Hours)	Cause and Corrective Action
1544	3/21/86	1624	3/21/86	RHR	.7	2A RHR pump removed from service to perform STP-11.9.
1735	3/21/86	2205	3/21/86	RHR	4.5	"B" Train RHR system removed from service for calibration of miniflow transmitter.
1110	3/31/86	1402	3/31/86	Chg. Pump	2.8	2C Charging Pump removed from service to perform STP-4.3.
1357	3/31/86	1903	3/31/86	Chg. Pump	5.9	2C Charging Pump breaker racked out for PMs on Auxiliary lube oil pump pressure indicator.
2230	4/3/86	2238	4/3/86	RHR	.2	2A RHR pump removed from service to perform STP-11.9.
0425	4/4/86	1015	4/4/86	RHR	5.8	"B" Train RHR system removed from service to change out potentiometer on discharge valve.
0335	4/5/86	0557	4/5/86	RHR	2.3	"A" Train RHR system placed on recirculation to obtain boron sample.
0617	4/5/86	0843	4/5/86	RHR	2.5	"B" Train RHR system placed on recirculation to obtain boron sample.
1212	4/7/86	1300	4/7/86	RHR	0.8	2A RHR pump secured due to air entering "A" Train RHR system. 2A RHR pump vented and return to service.